PROFESSIONAL LEARNING COMMUNITIES AND SCHOOL IMPROVEMENT:

IMPLICATIONS FOR DISTRICT LEADERSHIP

Kelly Flowers

Dissertation Prepared for the Degree of

DOCTOR OF EDUCATION

UNIVERSITY OF NORTH TEXAS

May 2018

APPROVED:

Jane B. Huffman, Major Professor
Banu Goktan, Minor Professor
Miriam Ezzani, Committee Member
James D. Laney, Committee Member and Chair of the Department of Teacher Education and Administration
Randy Bomer, Dean of the College of Education
Victor Prybutok, Dean of the Toulouse Graduate School

Flowers, Kelly. *Professional Learning Communities and School Improvement: Implications for District Leadership*. Doctor of Education (Educational Leadership), May 2018, 120 pp., 6 tables, 11 figures, references, 69 titles.

The purpose of this research was to understand the role of district leadership better in the implementation and development of professional learning communities. This investigation was a mixed-methods analysis of the perceptions of a school district's support in the implementation of professional learning communities (PLCs) at the school level. Additionally, in this study, I examined how the PLC framework supports systemic school improvement, using Hord's definition of the five dimensions of a professional learning community. A PLC literature review informed the study. A school district of approximately 14,000 students, and a high school of 2,219 students was selected as the population sample. One hundred high school staff members and 20 central office administrators completed the PLCA-DS of Professional Learning Community Assessment-District Support, developed by Olivier, Huffman and Cowan, to measure both school and district level personnel's perspectives regarding the district's role in the implementation of PLCs at the school level. Semi-structured interviews were conducted with district personnel as well as school leadership and professional campus based staff, which played integral roles in the development of professional learning communities. These roles include the school principal, assistant principal, liaison and other staff who are working collaboratively at the school and district levels to support PLC implementation. The investigation results indicated the importance of leadership and culture throughout this change process and critical to school improvement as evidenced by the study of District A and High School A1.

Copyright 2018

by

Kelly Flowers

ACKNOWLEDGEMENTS

Completing a terminal degree requires both emotional and academic support. I am fortunate to receive ongoing encouragement and expert guidance in this process. My dissertation committee chair, Dr. Jane Huffman, a leading scholar and researcher of professional learning communities, deserves my honor and sincere appreciation. Your critical feedback and patience allowed me to accomplish the life goal of a terminal degree. Thank you for helping me discover personal strengths through this process. In addition, I am grateful to my dissertation committee, Dr. Jim Laney, Dr. Miriam Ezzani, and Dr. Banu Goktan. Thank each of you for your thoughtful suggestions, insights and support throughout this journey. Additionally, I am most appreciative for the staff of District A and High School A1. Your openness and generosity in sharing your unique experiences, collective and personal understandings of PLCs as a framework for school improvement add to and enhance existing research.

I am also grateful to my extended family of McKinney ISD and Caldwell Elementary. Every day I am blessed to work alongside other dedicated educators who have committed themselves to providing students with opportunities for success. Thank you for your heart for students and your belief in their ability to achieve at high levels regardless of the obstacles they may face. My study of professional learning communities was enriched through our shared experiences in this most important endeavor.

Finally, this work would not have been possible without my loving and supportive mom, Nancy Mathieu, whose enduring belief in my ability to achieve this goal kept me going even in the most difficult of times. I also dedicate this work to my late grandmother, Pluma Walker Aiken who nurtured my love of learning and modeled persistence and faith.

TABLE OF CONTENTS

Page

LIST OF TABLES

Page

LIST OF FIGURES

Page

CHAPTER 1

INTRODUCTION

The demands for school improvement and increased accountability for student learning outcomes are critical issues that have been facing public education for decades. After the 1983 National Commission on Excellence in Education's publication, *A Nation at Risk: The Imperative for Educational Improvement*, the urgency intensified for school reform. In this U.S. Department of Education commissioned study, the authors found the following indicators of risk: a) a functional illiteracy in 13% of all American 17 year olds; b) a declining of verbal and quantitative scores on the Scholastic Aptitude Test (SAT); c) the inability of 80% of graduating seniors to write a persuasive essay, and d) a 72% increase in remedial math courses taken in public four year universities (National Commission on Excellence in Education, 1983).

In 1994, the Improving America's Schools Act (IASA) reauthorized the 1965 Elementary and Secondary Education Act (ESEA). Also passed in 1994 was the Goals 2000: Educate America Act requiring individual states and school districts to address the diverse needs of all students. This legislation addressed several major areas of concern in education:

- Incorporation of standards-based assessment and instruction for all students
- Renewed emphasis on high-quality teaching and student learning
- Establishment of partnerships among all stakeholders including families, communities, and schools
- Addition of a degree of flexibility within the confines of increased accountability for student achievement results
- Increase in resources provided to areas identified as having the greatest needs (Jorgensen & Hoffmann, 2003)

On January 8, 2002, President George W. Bush signed into law the No Child Left Behind Act of 2001 (NCLB). This groundbreaking legislation reauthorized the 1965 ESEA and also

increased accountability for student achievement, by tying these high stakes accountability measures to funding, which created "direct public accountability for individual student learning" (Jorgensen & Hoffmann, 2003, p. 6). For the first time, funding was directly linked to student achievement in individual schools and required districts to report these results to the public at large.

Then, in January 2007, U.S. Secretary of Education, Margaret Spellings, published *Building on Results: A Blueprint for Strengthening the No Child Left Behind Act (NCLB).* In this report, Spellings reasserted the federal government's commitment to nationwide improvement efforts in education to ensure every student reaches grade level or better achievement in both math and reading by 2014 as measured by mandated high-stakes testing. As a result of the federal laws, all states, districts, and schools must produce student achievement results that reflect equity, regardless of the differing demographics relating to income level, language proficiency, or disability.

More current statistical data from the 2013 National Assessment of Educational Progress (NAEP) measuring academic growth in all main content areas, indicated 66% of fourth-grade students across the U.S. scored below grade level in reading, and 80% of fourth graders from low socioeconomic backgrounds scored at or below proficient level in reading (National Center for Education Statistics, 2013). Therefore, despite this renewed focus on achievement and closing gaps, the U.S. continues to struggle with academic proficiency, especially when compared to students in countries around the world. For example, the 2012 Program from the International Student Assessment (PISA) ranked the United States 27th in overall math performance on a list of 34 countries (Organization for Economic Co-operation and Development, 2012). The 2012 *Nation's Report Card* offers more evidence of performance struggles by American students

(National Center for Educational Statistics, 2012). This report in cooperation with the U.S. Department of Education showed no notable growth in average reading and math scores of 17-year-old students since the 1970s. Based on the results of the aforementioned assessments, the relevance of a PLC framework as a mechanism for districtwide school improvement has emerged as a valuable approach. While school actions are critical to student success, district leadership, as reported by Marzano and Waters (2009), has "a measurable effect on student achievement" (p. 8). Thus, recognizing the importance of including the district and the schools in school improvement strategies may result in much needed reform.

Rationale of the Researcher

Unfortunately, today's educators face the same challenges outlined in educational reports and reform attempts from the past two decades. After 18 years as an educator (10 years as an elementary bilingual classroom teacher, 6 years as an elementary assistant principal, and 2 as an elementary principal), I recognize educators must provide students with an education resulting in high levels of academic achievement, regardless of economic, linguistic, or learning differences. But the successful facilitation of this type of quality instruction and intervention requires a depth of knowledge in content as well as in the learning process and instructional pedagogy. And while I received some of that expertise during my undergraduate and graduate studies, I gained a more thorough understanding, refined my teaching practices, and ultimately learned to increase student academic achievement through professional collaboration and interactions with my colleagues.

As a result of this success, I developed an interest in professional learning communities (PLCs) during my doctoral coursework. And my study of the PLC framework reinforced my

belief in the value of collaboration and shared learning among professional educators. Additionally, I realized district support of the PLC process offers a systemic approach to the complexities associated with school improvement. Through this study, I explored the role of district level support in school improvement within the context of a PLC framework.

Problem Statement

Change must occur at multiple levels of the educational system, including within the district and in individual schools to influence improvement. To address the needs of the students they serve successfully, school level leaders need the support of the district. The problem remains there is no single program or educational reform initiative, which facilitates this type of improvement. The absence of a solution challenges current researchers to examine the role of district leadership in supporting improvement throughout the district through professional learning community development in schools.

As noted in the research of Sashkin and Ergemeier (1993), there are four operational strategies for school improvement:

> (1) Fix the parts, which involve adopting proven innovation of various types
>
> (2) Fix the people, through training and development
>
> (3) Fix the school, by developing the school's capacity to solve their own problems
>
> (4) Fix the parts, by reforming and restructuring the entire enterprise of education, from the state department of education to the district and the school building (p. 3)

In summary, school district leadership must support schools and campus based leaders in their efforts to create and strengthen a PLC framework that facilitates school improvement efforts.

Purpose of Study

The purpose of this research was to understand the role of district leadership better in the implementation and development of professional learning communities. Within this study, I investigated how the district supports PLC development in schools. I used Hord's (1997) definition of the five dimensions of the professional learning community (reordered by Hipp & Huffman in 2010) as a benchmark for evidence of a professional learning community in schools. In this study, I measured perceptions of a school district's support for implementing PLCs at the school level using the five dimensions.

Conceptual Framework

The essential basis of this study focused on the role and perceptions of the school and the district in the establishment and development of the PLC framework or five dimensions of the PLC. Figure 1 illustrates the relationships of district support; PLC framework; and change, leadership, and culture have with schools and their improvement.

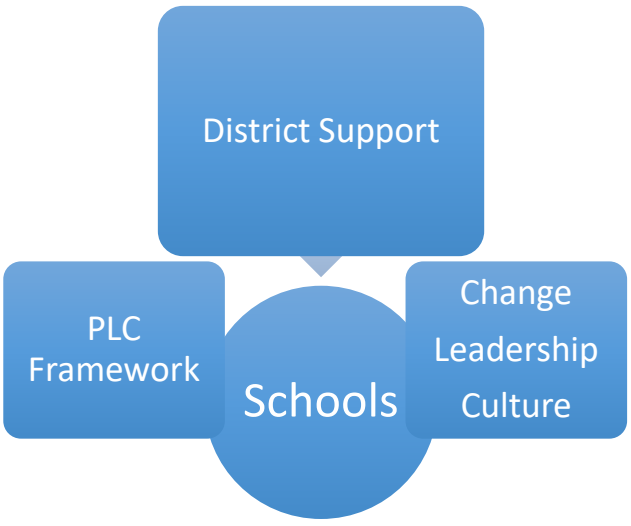

Figure 1. Conceptual framework.

Successful educational change requires a lens powerful enough to see the interrelations between the elements that comprise this complex whole. MacMillan defines a system as "a set of connected things that work together for a particular purpose" (System, 2018, para. 1). Cowan, Joyner, and Beckwith (2012) assert, "A systems approach involves all levels of the educational enterprise (i.e., national, state, intermediate agencies, district, school, and classroom)" (p. 8). School improvement efforts focused on increased student achievement requires coordination within and between these varying levels to support and sustain this shared goal (Cowan et al., 2012). In this study, the researchers examined the role of the district and the school as two of the most important levels of the educational system.

As noted by Cowan et al. (2012), the district's role of "establish[ing] local educational priorities and help[ing] maintain the focus on improving student learning" is a vital element of the school improvement process via a systems approach (p. 9). The district also plays a critical role in the development of a PLC in schools, including the culture it requires. "The culture established at the school level determines the extent to which the structures, processes, and relationships support student and teacher growth" (Cowan et al., 2012, p. 9). Hipp and Huffman (2010) define the re-culturing of schools within the PLC framework as: "a) whole school focus, b) efforts based on the five PLC dimensions, and c) participation by all professional staff in the school" (p. 21). The five dimensions of a professional learning community do not exist in isolation, but rather in a dynamic interdependent relationship that defines the entire system (Adelman & Taylor, 2007; Cowan et al., 2012; Fullan, 2006).

Moreover, "taken together, the five dimensions developed by Hord (1997) provide a holistic picture of how a PLC operates, as well as actions leaders need to take to create such a culture" (Hipp & Huffman, 2010, p. 13). DuFour and Fullan (2013) further explain "When the

PLC framework drives an entire system, participants come to have a sense of identity that goes beyond just their own piece of the system," which ultimately leads to deep cultural change. As a result, this cultural change within each school is key to system-wide change and improvement (DuFour & Fullan, 2013).

Research Questions

The research questions studied were:

1. What similarities and differences exist in perspectives held by district staff and school staff related to the implementation of PLC dimensions in schools?
2. From a district level point of view, what specific actions do *district staff* take to support PLC implementation at the school level?
3. From a school level perspective, what specific actions do *district staff* take to support PLC implementation at the school level?

Significance of the Study

Professional learning communities and the five dimensions—as defined by Hord (1997), reorganized by Hipp and Huffman (2010), and expanded by Olivier, Huffman, and Cowan (2015)—have gained significant recognition as a means to improve student outcomes in schools. However, the connection between district actions and the development of PLCs in schools through a more systemic approach is relatively new in educational research.

While considerable research exists in the area of PLCs at the school level, limited research focuses on district support for PLC implementation in schools. As a result, in the current study, I explored the role and specific actions of district leadership using perceptions of both district and school staff. Therefore, with the current study results, I sought to add to the

research and provide empirical evidence in the critical area of a more systemic approach to school improvement.

Operational Definitions

For clarity, definitions of commonly used terms in this dissertation are included in this section.

- *Collective learning*−Hord (1997) characterized the third dimension of a professional learning community as ongoing collaborative opportunities for staff "to learn to apply new ideas and information to problem solving" (p. 21). Hord and Sommers (2008) describe collective learning as "continuous, embedded learning that requires consistent professional reflection, collaboration, and focus on student growth" (p. 12).

- *Culture*−Peterson and Deal (1998) define culture as the underground stream of norms, values, beliefs, traditions, and rituals that have built up over time as people work together, solve problems, and confront challenges. This set of informal expectations and values shapes how people think, feel, and act in schools. With the current study, I focused on culture as it relates to the five dimensions of a professional learning community as defined by Hord (1997). Cultural change is inherent in the development of PLCs. PLC development is a cultural change.

- *Professional learning community (PLC)*−PLCs as defined by Hipp and Huffman (2010), are "Professional educators working collectively and purposefully to create and sustain a culture of learning for all students and adults" (p. 12). More specifically, the following five dimensions characterize PLCs: Shared Values and Vision, Shared and Supportive Leadership, Collective Learning and Application, Shared Personal Practice, and Supportive Conditions (Hipp & Huffman, 2010).

- *Shared personal practice*−The fourth dimension of a PLC is "process is based on the desire for individual and community improvement and is enabled by the mutual respect and trustworthiness of staff members," in which teachers review and share their teaching behaviors in a highly collaborative manner (Hord, 1997, p. 25). Furthermore, Hord and Sommers (2008) describe shared personal practice as "demonstrated by the staff from all assignments as administrators and teachers and from all grade levels and departments (in schools), and from all levels of the organization−coming together . . . to work collaboratively" (p. 12).

- *Shared values and vision*−The first dimension of a professional learning community, is described as "staff are encouraged not only to be involved in the process of developing a shared vision, but to use that vision as a guidepost in decision making about teaching and learning in the school" (Hord, 1997, p. 19). According to Hord and Sommers (2008),

> the vision grows as people work together over time. The community of professionals constructs a shared vision of the improvements that they will work toward for the increased learning of students," and shared values, are "the beliefs that guide the behavior of individuals. (p. 8)

- *Shared and supportive leadership*−The second dimension of a professional learning community is identified as "a shared and collegial leadership in the school, where all grow professionally" (Hord, 1997, p. 17). Hord and Sommers (2008) characterize this dimension as "one in which both administrators and teaching faculty possess shared decision-making power and authority" (p. 9).

- *Supportive conditions*−The fifth dimension of a professional learning community is identified as "supportive conditions determine when and where and how the staff regularly come together as a unit to do the learning, decision making, problem solving, and creative work that characterize a professional learning community" (Hord, 1997, p. 20). Hord and Sommers (2008)

posit “supportive conditions are two-fold involving both structural and relational factors that allow members of a professional learning community to work together effectively” (p. 14).

- *Systemic approach*−Knudson, Shambaugh, and O’Day (2011) describe a systemic approach to school improvement as “one in which the school district aligns its resources and strategies to confront common challenges and support effective solutions” (p. 3). Knudson et al. also note a systems approach requires differentiation based on the individual needs and contexts of schools.

- *Systemic change*−The process of changing a system from one paradigm to another by applying systems thinking and systems theory. According to Holzman (1993), systemic change is “fundamental change, affecting every aspect of our schools and every school in our school systems” (p. 18). In the current study, I focused on systemic change at the district and school levels and acknowledge the close connections of the improvement efforts between these two levels.

Summary

In Chapter 1, I outlined the research questions regarding the role of district leadership in PLC development, and school and district level staff perceptions about district efforts to promote PLC development in schools. This chapter also includes the conceptual framework, rationale of the researcher, significance of the study, and operational definitions. In the current study, I use Hord’s (1997) five dimensions of a PLC as criteria for evidence of improvement in schools. As mentioned, the problem of school improvement is multi-faceted and cannot be resolved with a singular approach. Rather, a multi-layered action plan focusing not only on the school but the

larger system of the district is necessary. PLCs are a reform construct and the importance of leadership and culture throughout this change process is also critical to school improvement.

Organization of the Study

This study is comprised of five chapters. Chapter 1 offers an introduction to the study including the problem statement, purpose of the study, research questions, and definition of key terms. The second chapter is a review of literature related to the investigation, specifically district actions that promote PLC development in schools. The third chapter offers an examination of the research methodology for collecting data to be provided in Chapter 4. Finally, Chapter 5 includes a discussion of the results of the study and implications for future research.

CHAPTER 2

REVIEW OF LITERATURE

In an attempt to meet the requirements of an increased focus on accountability and improvement, schools operating as professional learning communities (PLCs) emerged as a viable framework during the late 1990s and early 2000s. Astuto, Clark, Read, McGree, and Fernandez (1993) first defined a PLC, maintaining a PLC exists when "teachers in a school and its administrators continuously seek and share learning, and act on their learning" (p. 6). Furthermore, Astuto et al. suggested professionals engage in a community of shared vision driven by the singular purpose of improving their practice to increase student achievement.

Hord (1997) characterized PLCs by identifying the following five dimensions: a) Shared Values and Vision, b) Shared and Supportive Leadership, c) Collective Learning and Application of Practice, d) Supportive Conditions, and e) Shared Personal Practice. These five dimensions provide a strong foundation for school improvement efforts.

In this review of literature, I examine the role of district leaders as they manage systemic reform efforts, define the five PLC dimensions, and consider the role of district and school leaders in supporting PLC development in schools. I also examine cultural, organizational, and individual change inherent in PLC development.

A Systemic Approach to Improving Schools

The role of the district and the actions of central office leaders in school improvement efforts are becoming increasingly critical for student success (DuFour & Fullan, 2013; Hipp & Huffman, 2010; Knudson et al., 2011). Mason (2003) defined systemic improvement as the use of "aligned systems of standards and instructional guidance at all levels of the educational

enterprise to improve the quality of teaching and learning" (p. 3). More specifically, Schlechty (2009) described systems thinking as a framework designed to replace the antiquated and disconnected factory model of the industrial age on which education was founded with a more progressive framework. By focusing on the interconnectedness of various systems within systemic educational improvement, he provided a unique understanding of systemic improvement. Educational improvement, systemic in nature, requires the alignment of essential elements including standards, instruction, accountability, professional development, resources, and support to facilitate school improvement (Cowan et al., 2012; Mason, 2003).

Senge (1990) asserted "In mastering systems thinking, we give up the assumption that there must be an individual or individual agent, responsible . . . [and accept that] everyone shares responsibility for problems generated by a system" (p. 78). In short, systems thinking compels learning organizations to accept collective ownership for student learning and school success, which is at the core of educational improvement and organization change.

A systems approach creates and sustains a culture able to support a network of professional learning community schools. Systems thinking, as articulated by Senge (1994) is "a way of thinking about, and a language for describing the understanding, the forces and interrelationships that shape the behavior of systems" (p. 37). Cowan et al. (2012) further expand systems thinking as it relates to professional learning communities as frameworks for school and districtwide improvement efforts. DuFour and Fullan (2013) state:

> PLCs play a central role in dramatically improving the overall performance of schools, the engagement of students, and the sense of efficacy and job satisfaction of educators. Furthermore, this improvement occurs not just in isolated individual schools but also across entire districts, states, and provinces. To do this, leaders must grasp the underlying principles of PLCs and realize that changing culture in systemic ways is at the heart of any successful large-scale educational improvement. (p. 4)

Knudson et al. (2011) described a systemic approach to school improvement as "one in which the school district aligns its resources and strategies to confront common challenges and support effective solutions" (p. 3). Until recently, a majority of schools and districts did not explicitly discuss or consider the notion of coordinating multiple professional learning community schools to achieve systemic school improvement. Perhaps this has been the case because systems thinking and systemic change possess a comprehensive research base focused in a large part on business settings, rather than the educational arena (e.g., Senge, 1990; Sashkin and Egermeier, 1992). However, professional learning community schools, working together and aligned with district initiatives, provide a foundation for systemic improvement of schools.

A school culture inclusive of all five PLC dimensions is the first level of foundational systemic improvement. When these schools are aligned with district improvement initiatives and supported by the district, a network of support is established that facilitates system-wide communication and interaction. The implementation of school improvements, according to Adelman and Taylor (2007), requires alignment of "framework mechanisms" or supportive conditions at each level of the organization (p. 64). Adelman and Taylor asserted systemic change is successful when "effective and linked administrative leaderships at every level" is facilitated through these framework mechanisms (p. 65). Adelman and Taylor (2007) defined systemic change in terms of "a cultural shift in institutionalized values (i.e., reculturalization)" (p. 57), as opposed to the typical educational innovation that is implemented but not sustained.

Five Dimensions of a Professional Learning Community

A professional learning community includes the five research-based dimensions that Hord identified in 1997. Cowan (2003) described the connection between each of Hord's five

dimensions and school improvement. The first dimension—Shared Values and Vision—according to Cowan, "serve[s] a particular purpose in binding the norms of behavior within a school" (p. 78). Cowan noted these norms are rooted in the common vision and goals for improved student achievement. Shared and Supportive Leadership—the second dimension of a PLC—was presented by Cowan as "a collegial relationship among principals and teachers" [that] . . . "provides opportunities for broad-based participation in decisions for school improvement" (p. 77). Collective Learning and Application—the third dimension—is connected to school improvement: "The collaboration to achieve shared goals becomes focused intentional and urgent" (Cowan, 2003, p. 79). This level of collaboration ultimately "creates and strengthens the relationships necessary to sustain improvement efforts" (p. 79). Supportive Conditions—the fourth dimension—is defined by Cowan as relationships and structures that "support schools as professional learning communities as they engage in school improvement" (p. 80). The fifth dimension—Shared Personal Practice—according to Cowan (2003), is "the key to changing what occurs in the classroom, and this is at the heart of school improvement" (p. 79). Cowan asserted this dimension is highly dependent on the "establishment of a culture of mutual trust and respect, where both successes and failures can be shared to strengthen professional practice and improve schools" (p. 80). Cowan suggested these two categories of supports are difficult to separate within the context of school improvement because they are "highly interactive and interdependent, yet key to maintaining the growth and development of a learning community" (p. 81).

Hipp and Huffman (2003), Hipp, Huffman, Pankake, and Olivier (2008), Olivier et al. (2009), and Hipp and Huffman (2010) expanded this research base. Hipp and Huffman (2010) reordered the five dimensions originally identified by Hord (1997) to "provide a holistic picture

of how a PLC operates, as well as actions leaders need to take to create such a culture" (p. 13). According to Hipp and Huffman (2010), organizations functioning as a PLC construct are evidenced by the five dimensions: a) Shared Values and Vision, b) Shared and Supportive Leadership, c) Collective Learning and Application, d) Shared Personal Practice, and e) Supportive Conditions. An examination of each dimension follows.

Dimension 1: Shared Values and Vision

Hord (1997) proposed including all school personnel in the development of shared values and a shared vision that will guide future decision-making and shape collective actions. Hord and Sommers (2008) asserted that vision guides decision-making in a learning community and continually brings student growth and achievement to the forefront. They emphasize "the focus is always on students" (Hord & Sommers, 2008, p. 10).

This shared vision and core values of all staff creates and reflects a collective purpose to offer all students the opportunity to realize their maximum potential through high-quality education. In a study of the factors that promote the progression of schools functioning as PLCs, shared values characterize schools at the highest level of PLC implementation (LeClerc, Moreau, Dumouchel, Sallafranque, & St. Louis, 2012). In short, all staff share a common vision focused on student success. The process of shared visioning is a labor-intensive process requiring both "energy and commitment" (Huffman, 2003, p. 22). Huffman (2003) also posits the creation of a shared vision requires collective effort. A school principal or district leader cannot simply determine the shared vision to be adopted by the larger community. Rather, "the task of the leader is to share and combine the personal visions of faculty members into a collective vision molded and embraced by all" (Huffman, 2003, p. 22).

The identification of a shared vision and development of shared values, for both new and veteran staff, drives decisions and actions within a professional learning community. Effective induction and professional development of new staff can only flourish when schools focus on allowing teachers the opportunity "to transform their personal knowledge into a collectively built, widely shared, purpose driven, and cohesive professional knowledge base and belief system" (Fulton, Yoon, & Lee, 2005, p. 4).

Dimension 2: Shared and Supportive Leadership

Hord (1997) characterized Shared and Supportive Leadership as an intentional shifting of the role of a school principal *from* one holding all knowledge and being solely responsible for decision making *to* a leader who shares decision making with and learns alongside his/her teaching staff. Hord and Sommers (2008) reemphasized the importance of shared decision-making and authority within the democratic environment of a PLC. While the role of principal is critical to the implementation and development of a PLC, he or she is not the sole decision maker. Additionally, such principals do not solve all the problems facing the school; rather "administrators as well as teachers must be learners who together are openly discussing instructional problems and exploring solutions to the problems that they identify" (Hord & Sommers, 2008, p. 11).

Similarly, Fullan (2006) suggested leadership at all levels of a learning organization is critical to the sustainability of any improvement effort. In this analysis of Dimension 1: Shared and Supportive Leadership, three critical attributes emerged, which include "nurturing leadership among staff; shared power, authority and responsibility; and broad-based decision-making for commitment and accountability" (Hipp & Huffman, 2003, p. 8). The distribution of leadership

within a PLC framework is based on the needs of the organization and knowledge, not on tenure. A PLC framework affords “opportunities for trust building, consistently uses dialogue and inquiry, and centers on student growth and achievement” (Kennedy, Deuel, Nelson, & Slavit, 2011, p. 24).

Strong and effective leadership is a critical element in the successful implementation of a professional learning community (DuFour & Marzano, 2011; Kerr, Marsh, Ikemoto, Darilek, & Barney, 2006; Marzano & Waters, 2009). Hipp et al. (2008) posited inclusive leadership is a strong indicator of the health and sustainability of professional learning communities. According to Hipp et al., inclusive leadership exists when “leadership permeates throughout the school at different levels . . . it’s like an onion; it’s in layers, because we have so many people heading up different areas” (p. 183). This shared or inclusive leadership is yet another critical factor in building human capacity. Without shared leadership, this capacity building of all educators, regardless of years of experience or title, is unlikely. Within this dimension, teachers are given the freedom to make both programmatic and instructional decisions and ultimately modify their professional practice to meet student needs more effectively. Although the title of *school principal* may suggest only one person holds authority; the most effective school leaders recognize teachers often understand more about what needs to occur and empowers them to “act together on behalf of the common good” (Sergiovanni & Starratt, 2007, p. 176).

Dimension 3: Collective Learning

Hord (1997) declared a professional learning community is present when teachers and school administrators continuously seek and share learning and act on their learning. The goal of their actions is to enhance their effectiveness as professionals for the students' benefit. Hord

(1997) addresses collective learning as an important characteristic of effective professional learning and the ongoing need for development of educators. The traditional isolation of teachers in their individual classrooms should end, and all teachers, both new and veteran, should be provided with ample opportunities to observe other teachers, discuss best practices, and engage in professional dialogue and collaboration (Fulton et al., 2005, p. 4). Effective PLCs provide opportunities for ongoing formative assessments of teaching staff, self-assessment and reflection, peer coaching, and modeling. New teachers, in particular, should receive many opportunities early and often to learn from other more experienced teachers to gain insight into improving their own professional practice.

DuFour (2007) explained:

> The rise or fall of the professional learning community concept in any school will depend not on the merits of the concept itself, but on the most important element in the improvement of any school–the collective capacity, commitment, and persistence of the educators within it. (p. 5)

Hargreaves and Fullan (2013) further asserted the development of teachers within the context of a PLC solidifies their individual and collective strengths to adapt and respond to meet the diverse needs of the students they teach.

Dimension 4: Shared Personal Practice

Teaching is the only profession in which no formal residency exists for those new to the profession. Few organized opportunities exist for new teachers to observe and be supported by others in their profession. Seashore Louis, Marks, and Kruse (1996) describe shared practices as deprivatized practice. Deprivatized or shared practice in education is characterized by collegial, flexible relationships where teachers both give and receive feedback. "Peer coaching, teamed teaching structures, and structured classroom observations are some examples of shared personal

practice" (Seashore Louis et al., 1996, p. 760). Hord (1997) noted shared personal practice exists when teachers share professional practice, including professional work and strategies.

Effective schools serious about retaining teachers within the profession and also building capacity among all staff establish a community of collaboration that provides all teachers with multiple opportunities to observe, demonstrate, discuss, and receive formative feedback. These communities "ensur[e] that teachers share the language, tools, and practices valued by the profession" (Fulton et al., 2009, p. 16).

In their research, Sashkin and Ergemeir (1993) concluded successful educational improvement must be grounded in a systemic approach that is characterized by "allowing and attaining autonomy at the school-site level, by building strong school cultures that foster professional (and student) growth and development, that encourage innovation and constant improvement, and that are accountable for their results" (p. 21). The professional growth and development of teachers within a collaborative culture is the underlying premise of Dimension 4: Shared Personal Practice (Relational).

Dimension 5: Supportive Conditions

Generally, supportive conditions are categorized into two aspects of PLC development: structures (such as the physical layout of the school, scheduling, and time allotments) and relationships (such as levels of collaboration, problem solving, shared decision making, and visioning). According to Hord (1997), ". . . supportive conditions determine the *when* and *how* the staff come together as a unit to do the learning, decision making, problem solving, and creative work that characterize a professional learning community" (p. 20). Hord further asserts that while the physical structures can sometimes be a challenge, the development of the

professional relationships and interactions needed to function as an effective PLC is the more difficult of the two.

Boyd and Hord (1994) offered the following four anticipated outcomes of a school that successfully realizes the tangible and intangible elements of supportive conditions: a) reduction in isolation of staff, b) increase in staff capacity, c) caring and productive environment, and d) improvement in the quality of programming that students receive, which is the ultimate goal of all school-based improvement.

Fulton et al. (2005) made several recommendations directly addressing the need for supportive conditions. They suggested schools set up structures to allow new and mentor teachers to work collaboratively, observe in each other's classroom, and provide feedback. They also advocated for the training of mentors on how to support novice teachers, the minimization of non-teaching responsibilities for novice staff, allowing new teachers to focus on improving their practice, and the overall cultivation of professional culture that centers on collaboration, ongoing learning, and support.

Leadership

Effective leadership at multiple levels of a learning organization is closely connected to the five dimensions of PLCs. Cowan et al. (2012) explained educational improvement requires complex changes to the entire process and commitment on national, state, district, school, and classroom levels. These researchers noted three key findings:

> 1) districts and schools should stop trying to address every problem with a unique solution and focus their improvement plans on systemic strategies small enough to be manageable but large enough to make a difference in student achievement;
>
> 2) to increase the probability of successfully improving student achievement in low-performing systems, the district needs to concentrate its efforts on aligning curriculum, instruction, and assessment to state standards;

> 3) leaders at all levels of the system (including teacher leaders) need to support the selected focus for improvement, so resources of time, personnel, and energy are targeted on that focal point. (Cowan et al., 2012, p. 4)

District Role

District leaders are in a unique position to influence widespread change throughout the individual schools within their district. With this potential influence comes a greater responsibility to ensure schools within the district are aligned with district initiatives and district initiatives are aligned with school needs. Among the 10 characteristics reported by Fullan, Bertani, and Quinn (2004) is leadership development. These characteristics include: a) internal leaders with clear driving conceptualization, b) collective moral purpose, c) the right bus (structure and roles), d) leadership development, e) lateral capacity building (schools learning from each other), f) deep learning, g) productive conflict, h) demanding cultures, i) external partners, and j) growing financial investments. In addition to possessing these characteristics mentioned, a district must also commit to a system-wide approach to change. Fullan's (2005b) tri-level approach to improvement targets cultural change and leverages the leadership at multiple levels of the organization to ". . . accelerate the development of good changes like the spread of professional learning communities" (p. 7).

Fullan's (2005b) tri-level solution is an approach involving three levels of leadership: the school, the district, and the state. In his study, Fullan focused on the first two levels of leadership: the school and the district. The district, or second level of reform in Fullan's model, is of particular importance due to its influence on school reform. According to Rorrer, Skrla, and Scheurich (2008), the role of district leaders as "substantial contributors" to systemic educational reform has been largely overlooked for the past two decades, resulting in a void in this research base (p. 308). Further, Rorrer et al. (2008) stated: "Research studies on districts over the past 20

years have been relatively fewer in number and discontinuous compared to research on schools as the center of reform" (p. 309). Despite this void, Rorrer et al.'s research synthesis on district roles related to "systemic school reform resulted in four essential roles of districts: a) providing instructional leadership, b) reorienting the organization, c) establishing policy coherence, and d) maintaining equity focus" (pp. 313-314).

Rorrer et al. (2008) explained in the first essential district role, the role of the superintendent and central office administrators as district level instructional leaders is a shift in traditional supervisory responsibilities. The two most common characteristics associated with district level instructional leadership include: "generating will" or the ability to garner the community's commitment to improvement efforts and "building capacity" or the ability to support these collective efforts through the focused development of all district and school level staff (Rorrer et al., 2008, p. 315).

Decreased variability in improvement efforts of individual schools reflects "a district ethos or culture that defined common values and norms of work for the district as a whole" (Anderson, Mascall, Stiegelbauer, & Park, 2012, p. 415). They suggested district culture is a positive force for improvement when it is team-based and results-oriented. District leadership is simply a part of the larger system. When it aligns with beliefs, commitments, and norms through a shared culture, it ". . . can act as a powerful integrating force that limits variability among schools, particularly when culture is embedded in organization structures and systems" (Anderson et al., 2012, p. 416).

The role of a district in implementing PLCs system wide is a critical one. In the case study of Stamford Connecticut Public Schools, Thessin and Staar (2011) asserted districts play four key roles:

- Ownership and support–districts must involve teachers and administrators in developing and leading the PLC process
- Professional development–districts must teach administrators and teachers how to work together effectively in plcs
- Clear improvement process–districts must show how plcs fit into the district's improvement process, so each PLC's work fits into an overall plan
- Differentiated support–districts must support schools according to their unique needs to help them move to the next step in their PLC growth

District leadership's ability to reorient the organization is another key instructional role. This process involves the shaping and redefinition of district culture as well as the realignment of district structure to become more decentralized. Decentralization gives greater latitude to individual schools to make decisions based on their needs, while still maintaining alignment with core values and vision of the district culture. The third role of a district according to Rorrer et al. (2008) is establishing policy coherence, which involves "aligning resources with identified district needs" (p. 326). Central office administrators are in the unique position to ensure district resources, both human and financial, are allocated to support and realize district level goals for improvement. The fourth and final role of a district in the process of system-wide reform is to maintain an equity focus (Rorrer et al., 2008). "This role is critical in two main ways: 1) district leadership must acknowledge past inequity, and 2) central office administrators must establish systems to ensure future equity, namely through transparency" (p. 329).

Thus, it is clear central office leadership is critical to the establishment and development of the PLC framework that supports school improvement. "Leadership from the central office matters−both in terms of raising student achievement and in terms of creating the conditions for adult learning that lead to higher levels of student achievement" (DuFour & Marzano, 2011, p. 87). DuFour and Marzano asserted, "effective leadership centered on clearly communicated

goals for improvement at district level is needed to firmly root the PLC process at the school level" (p. 89).

School Leadership

In a 2003 study, Huffman and Jacobson explored the relationship between the perceptions of principal leadership style and the core processes of a professional learning community. Their study results suggested the leadership of a school largely determines the success of the PLC. These school-based leaders possessed skills and insight to serve as effective change agents guiding the school staff to develop and articulate a shared vision collaboratively. In short, the results of the study indicated leaders who are collaborative, consistently refocusing their staff on their collective vision, tend to have the greatest success in developing a PLC culture.

Similarly, Hipp et al. (2008) offered qualitative case studies on the sustainability of professional learning communities. These studies focused on two public schools that began implementing the PLC process in 1998. This particular study covered a 5-year period from 2003-2008. Based on the analysis of interview data, the researchers identified patterns in the schools supporting the sustainability of successful PLCs. Their results indicated school leadership is critical to the sustainability of a PLC, namely the leader's ability to nurture a culture of trust, mutual commitment, and collaboration.

In another 2008 study, Mullen and Hutinger examined the role of a principal in the effective facilitation and support of collaborative learning groups among teachers within a PLC. The researchers acknowledged the "study group strategy" (Mullen & Hutinger, 2008, p. 261)—the grouping of educators to learn collectively and to develop their professional knowledge and

expertise—is a long-standing strategy of professional learning communities. The practice indicates teachers are successful in professional development situations, which facilitate a supportive climate on a consistent basis. Mullen and Hutinger also suggested a primary role of a principal as instructional leader should be refocused on the role of professional developer. "Principals are in the unique position to create conditions that foster teacher development and student learning" (Mullen & Hutinger, 2008, p. 261). Therefore, it is essential for principals to take on that role and work to build leadership capacity in their faculty. With strong school leadership, professional learning communities become an effective and sustainable strategy to facilitate relevant professional learning.

The Role of Culture

Peterson and Deal (1998) noted the importance of culture in overall school improvement:

> Culture is the underground stream of norms, values, beliefs, traditions, and rituals that has built up over time as people work together, solve problems, and confront challenges. This set of informal expectations and values shapes how people think, feel, and act in schools. This highly enduring web of influence binds the school together and makes it special. (p. 28)

They argue the existence of a student-focused culture is a prerequisite for any meaningful or lasting improvement within schools. A student-focused culture is characterized by the following five attributes:

- Presence of a common purpose resulting in high levels of staff commitment
- Evidence of underlying norms of collegiality, improvement, and hard work
- Clearly observable rituals and traditions that promote staff, student, and parent shared successes
- An established informal network of storytellers, heroes, and heroines who provide a social web of information, support, and history
- A clear presence of success, joy, and humor

In *Beyond the School: Exploring a Systemic Approach to School Turnaround*, Knudson et al. (2011) echoed the need for a strong district culture, which reflects a student-centered mission, clear expectations, and a differentiated approach to individual school needs. This service-oriented stance builds on successes and develops leadership throughout the organization. In a 2013 study, Wells and Feun focused on the role of district level leadership and PLC formation and effectiveness: "The results of this study affirm the importance of the level of commitment for PLC implementation at the district level" (p. 251).

In summary, Wells and Feun (2013) maintained the more successful district in their study (District B) intentionally implemented professional learning communities as measured by both qualitative and quantitative results. Most notably, Wells and Feun's findings indicated District B "built a system that increased the capacity of teachers as leaders to work with data analysis, intended to promote self-reflection and growth," (p. 253), where the less successful district (District A) focused its efforts on a 3-day training for school principals to disseminate the information regarding PLCs to the staff. Furthermore, District B maintained consistency in its message about the focus of PLC work to improve student achievement, while District A did not provide a clear message of the purpose of the PLC work, leading to frustration among staff and less successful implementation and sustainment of the PLC framework. PLC schools can be successful individually; however, their sustained effectiveness depends on continuity at all levels of the local system, particularly among the district and individual schools. Moreover, a district level establishment of PLC culture with support at all school levels reduces variability, while increasing the probability of "a positive force for change and improvement" (Fullan, 1985, p. 415). Kennedy et al. (2011) asserted professional learning communities require a collective responsibility for the education of each student they serve. "When the adults in a school

continually engage in dialogue and inquiry to support student learning, a re-culturing takes place" resulting in risk taking, shared learning, and change (Kennedy et al., 2011, p. 23).

Cultural change is facilitated by the supportive conditions and specifically the relational attributes such as trust, relationships and encouragement. As increasing accountability results in more pressure, professional learning communities offer a path to lasting system-wide improvement rooted in cultural change. Fullan (2005a) defined the collective "we" as "systems thinkers in action" (p. 8) and continues to describe systems thinkers in action as "some academic colleagues and key practitioners, at all levels of the system, who are actively leading the use of change knowledge" (p. 8). Hipp et al. (2008) echoed this in their "reframing [of] institutionalizations . . . as sustainability at the most mature level" of school development (p. 175). They posit "a school's culture is not static, but is a continual interaction in which attitudes, values, and skills continually reinforce each other . . . sustain[ing] momentum for school improvement over time" (Hipp et al., 2008, p. 176).

Garrett (2010) explains the defining principles of a strong and positive student-centered culture aligns with both systemic improvement and professional learning communities and are characterized by "a fundamental shift in the school's culture that focuses on learning, professional collaboration, and results" (p. 5). "The culture established at the school level determines the extent to which structures, processes, and relationships support student and teacher growth" (Cowan et al., 2012, p. 9). Anderson et al. (2012) defined culture as "common values and norms of work," critical in systemic improvement (p. 415). DuFour and Fullan (2013) connect the role of systems thinkers within the context of cultural change to the systemic implementation of PLC schools: "Systemic implementation of the PLC framework requires changing the way things have typically been done" (p. 2). DuFour and Fullan also discuss the

difficulty and necessity of cultural change to the successful implementation of the PLC framework. They are clear that while cultural change is difficult, it is necessary and can ultimately yield "systemness" or "a sense of identity that goes beyond just their own piece of the system" (p. 3), and this encourages them to work continually to improve the organization as a whole.

Organizational and Individual Change

The concept of change in the educational arena is ever present and critically important. In fact, the primary purpose of education is student learning, and student learning is enabled by successful change initiatives. Hord (1997) suggested, "The baseline of education is learning, and learning occurs if change results" (p. 3). Despite the simplicity of this definition of change, it is an inherently complex process, which requires understanding on multiple levels, including the role of the individual and the culture of the organization. Osborne (1993) explained:

> Vital is an understanding of human nature when confronted with the concept of change. Only by understanding that real change also involves dealing with member's deep-seated motivations can the organizational architect form a cast to mold and shape a strong, unified culture. (p. 8)

Change is a multi-layered process that occurs simultaneously at the individual and organizational level (Hall & Hord, 2006). According to Hall and Hord (2006), "change is a process by which people and organizations move as they gradually come to understand and become skilled and competent in the use of new ways" (p. 4). Fullan (2007) echoed the assertion, stating, "change is a process, not an event" (p. 168). Fullan (1985) noted, "change at the individual level is a process whereby individuals alter their ways of thinking and doing" (p. 396). Furthermore, Hord, Rutherford, Huling-Austin, and Hall (1987) reinforced the importance of individual change: "Change is accomplished by individuals . . . [O]nly when each (or almost

each) individual in the school has absorbed the improved practice can we say that the school has changed" (p. 13). Yet change is a multi-faceted process, involving change of the individual as well as the collective group or organization. Huffman (2003) compared Begley's (1999) metaphor of school-wide shared visioning and change to the multi-layered onion. Huffman (2003) asserts "placing the individual at the center of the onion emphasizes that the individual is the catalyst for growth and development in organizations" (p. 30).

Lunenburg (2010) defined organizational change as "the movement of an organization away from its present state toward some desired future state to increase its effectiveness" (p. 1). Lunenburg also notes there are six main factors that explain the resistance to organizational change which include: 1) uncertainty; 2) concern over personal loss; 3) group resistance; 4) dependence; 5) distrust in administration and 6) awareness of weaknesses in the proposed change (p. 4). Conversely, Lunenburg cites six specific ways to overcome resistance to organizational change including: 1) education and communication; 2) participation and involvement; 3) facilitation and support; 4) negotiation and agreement; 5) manipulation and co-optation; and 6) explicit and implicit coercion (p. 7). These strategies to overcome the resistance to organizational change are closely aligned to the five dimensions of a professional learning community. Figure 2 provides a comparison of the five dimensions of a PLC with Lunenburg's (2010) approaches to overcome resistance to organizational change.

There were no apparent connections between Lunenburg's strategies of manipulation and cooptation, explicit and implicit coercion, and negotiation and agreement and the five dimensions of a PLC. Furthermore, there was not an approach to overcoming resistance to change that connected to two of the five dimensions of a PLC—shared values and vision and shared personal practice. However, there was alignment between three of the six approaches to

neutralize resistance to organizational change and three of the five dimensions of a professional learning community.

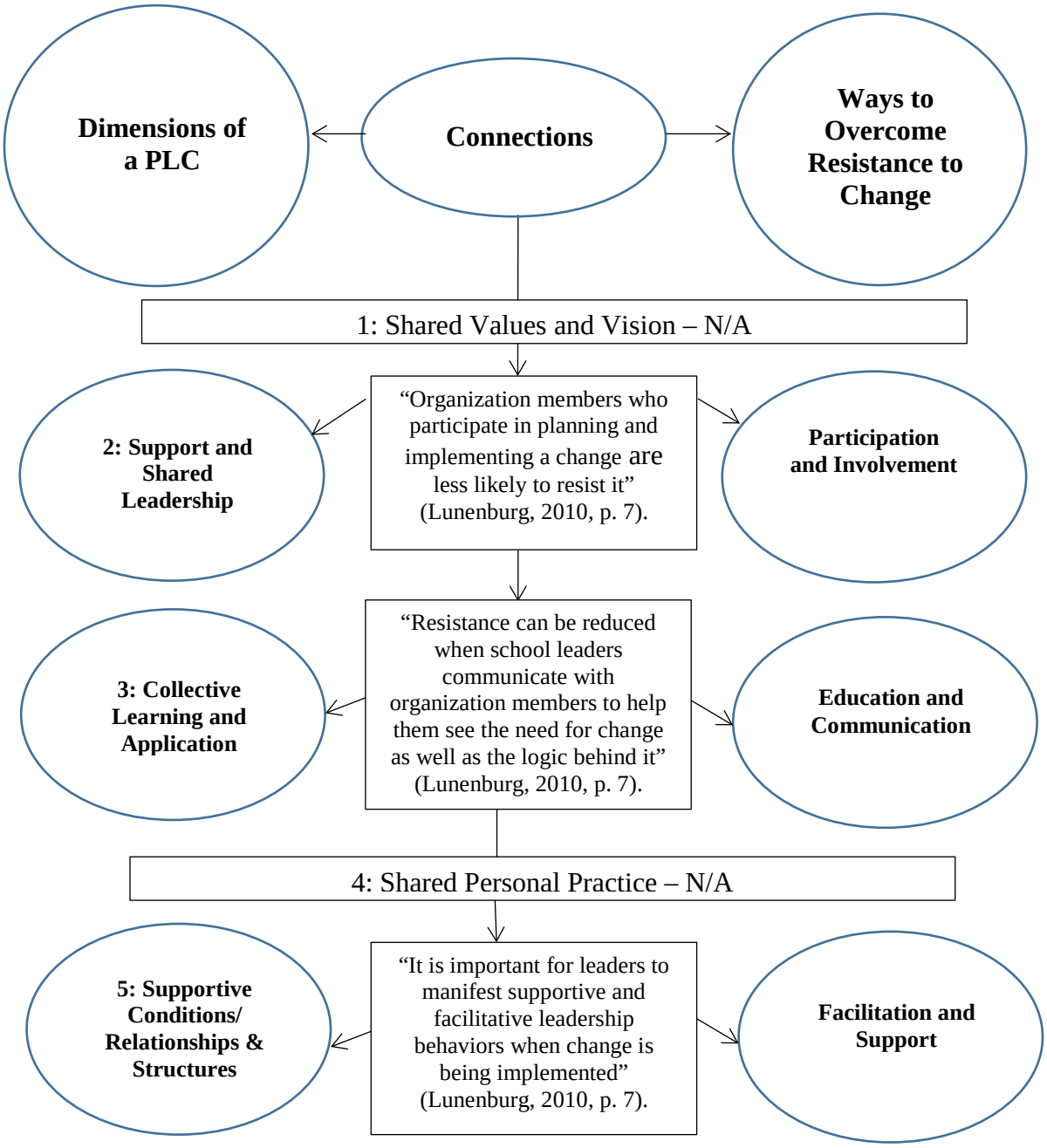

Figure 2. Five dimensions of a PLC and ways to overcome resistance to change.

To realize organizational change, district leaders must address both individual and organizational needs and contexts, and often use change facilitators (Hord et al., 1987). In order

to fulfill their role as a change agent, principals must be able to determine both individual and organizational priorities. School leaders shape the school culture and shared beliefs, practices, and norms. With a vested interest in the facilitation of the change process and its impact on individuals as well as the organization, school leaders also create conditions for individual and organizational development to merge and reculture their schools.

Summary

In the literature review, I considered several factors influencing the implementation of the PLC framework in schools. Central to this school-based work is the support of the district. Additionally, the role of leadership and the importance of culture and change are important. To explore this connection, I analyzed specific and observable district leadership actions and structures that support PLC development in schools. Thompson, Gregg, and Niska (2004) stated: "With all of the challenges facing schools today and the emphasis on increased accountability for student learning, the idea of a school where people working together can create the results they truly desire, is especially attractive" (pp. 2-3). According to Thompson et al.' (2004) study results, the path to this type of shared learning and accountability takes place through the creation and sustaining of collaborative practices. Increasing accountability continues to be an unrelenting pressure facing schools. District support for schools as professional learning communities can be the first critical step addressing accountability issues and implementing systemic improvement within the local district.

Consistent with the literature in this chapter, systemic school improvement depends on a variety of factors. Most notably the factors include district and school leadership, district support for the five dimensions of a PLC (Hipp & Huffman, 2010; Rorrer et al., 2008), a student-

centered culture, and the role of individual and organizational change (Fullan, 2007; Garrett, 2010; Hall & Hord, 2006; Lunenburg, 2010).

CHAPTER 3

METHODOLOGY

The purpose of this research was to understand the role of district leadership in the implementation and development of professional learning communities. In this investigation, I sought to understand the role of district-based actions in the development of a professional learning community (PLC) in a high school and to explore the perceptions of school and district level staff related to these actions. The research design employed a mixed methods approach including both quantitative and qualitative data collection and analysis. The quantitative measure, the Professional Learning Community Assessment-District Support (PLCA-DS), which focuses on district level actions to support the five dimensions of the PLC, was used to measure both school and district leaders' perceptions. The qualitative data collection methods included interviews with school and district level staff. Also, a thorough document review of school and district improvement plans, PLC agendas, and other documentation was completed to provide another layer of qualitative data.

In summary, Chapter 3 are the details of the research design, quantitative and qualitative research methods, population sampling including site selection, and data analysis to answer the research questions:

1. What similarities and differences exist in perspectives held by district staff and school staff related to the implementation of PLC dimensions in schools?
2. From a district level point of view, what specific actions do *district staff* take to support PLC implementation at the school level?
3. From a school level perspective, what specific actions do *district staff* take to support PLC implementation at the school level?

Research Design

In order to examine the perceptions of school and district level staff regarding the district's role in the implementation and development of PLCs in schools, I selected a mixed methods approach. A mixed methods approach relies on both quantitative and qualitative data collection and analysis to address the research questions. According to Yin (2011), a mixed methods approach to research design "offers an option that actually tries to take advantage of the similarities and differences in qualitative and quantitative methods" (p. 289). The specific mixed methods approach used in the current study was sequential explanatory. Creswell (2009) describes sequential explanatory as a mixed methods approach to research which involves the collection and analysis of quantitative data prior to the collection and analysis of qualitative data. Furthermore, Creswell notes a sequential explanatory mixed methods approach enables the researcher to use qualitative results to further explain or interpret the quantitative results of a study. In keeping with the design of a sequential explanatory, I analyzed the results of the district and school-based PLCA-DS survey first to determine similarities and differences between perspectives of school and district level staff. After this quantitative analysis was complete, I collected and analyzed the qualitative data. Specifically, I conducted interviews with district and school level staff based on the literature review and analysis of the PLCA-DS results. A document review and analysis was also completed. The qualitative data collection and subsequent analysis provided additional insight into the perceptions of school and district level staff. Additionally, this data informed school and district personnel's perspectives on actions of district staff that support or inhibit PLC implementation. In summary, to answer:

- Research Question 1: What similarities and/or differences exist between perspectives held by district staff and school staff related to the implementation of PLC dimensions in schools?

I reviewed the PLCA-DS data to determine similarities and differences among the perspectives of school and district staff.

- Research Question 2: From a district level perspective, what specific actions do *district staff* take to support PLC implementation at the school level?

I reviewed district level PLC documents and results of semi-structured interviews of district staff.

- Research Question 3: From a school level perspective, what specific actions do *district staff* take to support PLC implementation at the school level?

I reviewed school level PLC documents and results of semi-structured interviews of school staff.

Quantitative Measures

The quantitative measure used in this study was the *Professional Learning Community Assessment-District Support (PLCA-DS)* survey instrument. This instrument, developed in 2015 by Olivier, Huffman, and Cowan, is a survey tool used to assess both school and district staff perceptions. These points of view, specifically those regarding the role of district leaders' actions as related to PLC development and implementation at the campus level, are measured with a 67-question survey that employs a 6 point Likert-type scale. The questions are divided into the five dimensions of a professional learning community that include Shared Values and Vision, Shared and Supportive Leadership, Collective Learning and Application, Shared Personal Practice, and Supportive Conditions. The PLCA-DS survey participants are prompted to read statements related to each dimension and then rate them on a Likert-type scale of 1 = *strongly disagree* to 6 = *strongly agree*. These statements, when measured using the Likert-type scale, inform the degree to which district and school staff believe district staff are supportive of PLC development and implementation. A portion of the PLCA-DS survey is found in Figure 3

(Oliver et al., 2015). Finally, a reliability analysis was conducted on the PLCA-DS survey instrument that resulted in Cronbach Alpha scores ranging from .973 for Dimension 3 to .955 for Dimension 2, which confirmed it is a reliable construct.

Shared and Supportive Leadership	
	District leaders…
1	…model effective leadership practices.
2	…share leadership responsibilities with school level administrators.
3	…build leadership capacity among school staff.
4	…provide opportunities to engage school staff in district-level decision making.
5	…share information with school staff to guide school improvement.
6	…promote a sense of shared responsibility for the learning of all students in the district.
7	…provide opportunities for collaboration between the district and schools.
8	…provide access to relevant data to school staff in order to make decisions about instruction.
9	…collaborate with school staff to assign personnel based on school needs.
10	…establish clear expectations for improvement initiatives, with flexibility for implementation based on school needs.
11	…clearly communicate the importance of alignment of curriculum, instruction, and assessment.
12	…encourage shared accountability among district and school staff.
13	…monitor implementation of effective teaching and learning practices.
14	…support decisions about teaching and learning based on a shared vision.
15	…ensure local education boards adopt practices that support the district vision of schools as professional learning communities.
16	…model professional learning practices in district staff meetings.
Comments:	

Figure 3. PLCA-DS survey sample section.

Qualitative Measures

The qualitative measures in this study consisted of semi-structured interviews with district leadership, school leaders, and teachers, as well as a review of school- and district-based documents relevant to district support for PLCs. I developed a semi-structured interview

protocol to explore further school and district staff perspectives of district support on PLC implementation and development.

Another qualitative measure employed is review of documentation related to PLC implementation and development at both the school and district level. These documents may include school and district improvement plans involving PLCs, PLC agendas at the school and district level, and other relevant documentation regarding district support for PLC development in schools. Qualitative data were also obtained through the coding of emergent themes of semi-structured interviews and document analysis of PLC support within District A and High School A1. I reported and analyzed all responses regarding the research questions.

Population and Sampling

To understand the role of district-based actions better in the development of a professional learning community (PLC) in a high school and to explore the perceptions of school and district level staff related to these actions, it was necessary to select a school district with an established professional learning community framework. School District A with a student enrollment of 13,818 in 2015-2016 and 21 schools began a district-wide strategic planning process in 2010. In October of that year, it organized the first group of action teams following the establishment of the district's year one action plans. One of the resulting action plans focused on the development of PLCs through district level support in schools, a primary factor in selection of this school district. Strategic planning is used at both district and school levels. Both must implement strategic planning as evidenced by High School A1 Principal in the following quote:

> The high schools strive to provide rigorous and varied opportunities, both in academics and extracurricular programs that will prepare students for college and or career

> pathways. The approval of the high school strategic plan further strengthens the rigorous academic opportunities that students, parents and community members have come to expect from [High School A1 and District A].

In some districts, the district leadership supports PLCs as an improvement process; however, in most cases, the school leadership initiates them. Conversely, in the case of District A, the district level leader initiated PLC development in 2010 and charged both the school and district level leaders to implement and sustain the PLC framework. Therefore, in the current study, I sought to discover how district level efforts support the development of the PLCs in schools, and how district and school level staff views this support.

I selected District A due to their length of PLC implementation, since 2010. In the current study, I used the results of a January 2015 administration of the PLCA-R to determine the selection of High School A1 as a study site. Hipp and Huffman developed the original PLCA in 2003 and Olivier and Hipp revised it in 2010 to the PLCA-R. This instrument measures the five dimensions of a PLC Hord identified in 1997. The PLCA-R contains 52 items (Olivier & Hipp, 2010) related to the five dimensions of a school-level professional learning community (PLC) identified by Hord in 1997 and were later refined by Hipp and Huffman in 2010. The PLCA-R measures each dimension of the PLC with a 4-point Likert-type scale: 1) *Strongly Disagree,* 2) *Disagree,* 3) *Agree,* and 4) *Strongly Agree*. PLCA-R results from this school indicate high levels of PLC implementation in all five dimensions with a mean range from 3.11 to 3.18.

Participants of the study included district personnel from the central office of District A, as well as school leadership and professional staff at High School A1 who have played integral roles in the development of professional learning communities. These roles include the school principal, assistant principals, liaisons, and other staff who work collaboratively at the school and district levels to support PLC implementation. Additional roles include learning leaders and

department chairpersons who now fulfill the role as facilitators of professional learning for their respective teams and content areas and high school teachers at High School A1. All of the aforementioned participants were interviewed.

Data Collection

Data collection for this study included the PLCA-DS survey results of school and district staff in December 2016, interviews of district and school staff in September 2017, and analysis of documents and artifacts at both the district and school level related to PLC implementation and development. The PLCA-DS survey was administered to 78 school staff members including school administrators and teaching staff and 14 central office staff including curriculum directors, learning liaisons, and an executive director. The PLCA-DS survey results solicited participants' perspective regarding the role of district staff in PLC implementation and development. The survey was sent to study participants via a secure link using the Qualtrics online survey tool platform. The individual IP addresses of each survey participant were recorded to ensure no duplication of responses.

In this study, I employed a sequential explanatory mixed methods approach, including an initial analysis of the quantitative data provided by the PLCA-DS followed by the qualitative data analyses gathered through school and district interviews and a document review. The PLCA-DS results were analyzed quantitatively through the 6-point Likert-type scale with a mean score of 5 or more indicating strengths in the dimensions of the PLC implementation. The PLCA-DS December 2016 results indicated a strong alignment between district and staff responses. The only dimension that showed any statistically significant difference was Dimension 1: Shared and Supportive Leadership. Given these results and in response to

Research Question 1, the study included a careful analysis of differences in perspectives of district and school staff as related to the first dimension. School improvement requires assessment of a viable professional learning framework, characterized by the PLC dimensions at the school and district level. I interviewed district and school staff directly involved in the strategic planning process and implementation of a PLC framework. These interviews were conducted to glean additional insight from school and district staff. Specifically, I used the interview as a follow up to the PLCA-DS survey to gain a deeper understanding of participants' perceptions of the role of district staff in PLC implementation and development. The following central office staff were interviewed: two central office administrators and two district liaisons who support campuses through PLC implementation and development and serve as a critical link between district and school staff within this process. At the campus level, the following staff were interviewed: two campus administrators, three high school teachers one of which was a department chair for a total of nine interviewees.

Interviews, which ranged from 21 to 39 minutes were audio recorded and subsequently transcribed. District leaders, school leaders, and teaching staff were interviewed individually. The interview questions followed an open-ended interview protocol format to address the three research questions. The interview questions were constructed from an adaptation of a similar dissertation study (Tinsley, 2016). Additionally, I constructed some questions from the PLCA-DS: Dimension 1. The survey responses based on Dimension 1: Shared and Supportive Leadership indicated the most differences between school and district staff.

Questions followed recommended practices as explained by Yin (2011): "The interview protocol usually contains a small subset of topics—those that are considered relevant to a given interview" (p. 139). Yin also noted an interview protocol should yield a "guided conversation"

by providing the interviewer with a “mental framework” as opposed to a fixed set of questions indicative of a structured interview (p. 139).

The questions listed are the interview questions for district staff which were adapted from interview questions created and used by Tinsley in her 2016 dissertation:

1. Describe your position and responsibilities in the district.
2. Describe your role in the implementation of the PLC framework at the district level.
3. Describe your role in the implementation of the PLC framework at the school level.
4. Describe actions, tools, or structures you have used to help develop the PLC framework at the district level.
5. Describe actions, tools, or structures you have used to help develop the PLC framework at the school level.
6. What have been the effects of the PLC framework on district culture?
7. What have been the effects of the PLC framework on school culture?
8. Identify and describe any actions and processes you have developed or supported to assist campus leaders with PLC implementation.
9. What factors or actions by district leadership have inhibited PLC implementation within schools?
10. Describe your role in supporting collaboration among schools within the district?
11. What role if any do you have in the creation or analysis of common formative assessments?
12. How do you support schools in their work of providing opportunities for teachers to share effective professional learning community practices?

The questions listed are the interview questions for school staff which were adapted from interview questions created and used by Tinsley in her 2016 dissertation:

1. Describe your position and responsibilities.
2. Describe processes district leadership have utilized to lead and/or support a PLC framework at your school.
3. Describe your role in the implementation of the PLC framework.

4. Describe actions, tools, or structures you have used to help develop the PLC framework.
5. Describe actions, tools, or structures district staff have used to help develop the PLC framework at your high school.
6. What have been the effects of the PLC framework on the culture of your school?
7. What have been the effects of the PLC framework on teacher collaboration and student achievement at your school?
8. Identify and describe any actions or processes the district has developed or supported to assist campus leadership in PLC implementation.
9. What factors or actions by district leadership have inhibited PLC implementation at your high school?
10. What is the district's role in supporting collaboration among schools?
11. What role if any do you have in the creation or analysis of common formative assessments?
12. How does the district support your high school in their efforts to provide opportunities for teachers to share effective professional learning community practices?

Document Analysis

The term document refers to materials such as photographs, videos, diaries, manuals, memos, instructional materials, case records, and other various artifacts that can be used to provide supplemental information in a qualitative study (Bogdan & Biklen, 2003). I analyzed documents related to the implementation and development of PLCs using the Curriculum Strategy Action Plan that resulted from the strategic planning process or Lead 2021 in District A. The strategy and specific objectives outlined are aligned to the PLC dimensions measured by the PLCA-DS. The Curriculum Strategy Action Plan was used as the primary method to analyze documents related to PLC implementation and development because it is aligned to the dimensions of a PLC and is a prominent document at the district and campus level. I first

analyzed the documents to determine how they support the specific objectives outlined in this action plan. Additionally, all documents were categorized as either district or campus based documents, depending on where they originated and/or where they are primarily used. District actions, processes, and structures related to PLC implementation, as evidenced by the document review, provided another layer of data to respond to the research questions that have been posed.

These documents from the school and district level, included campus and district improvement plans related to district actions supporting PLC implementation in schools, PLC training documents and meeting agendas, as well as other pertinent documents related to PLC development. One example of the type of documents to be reviewed in this study includes an action plan and a strategic planning process for PLC development at both the district and school levels. Figure 4 displays examples of information documenting the district action plan as it relates to PLC implementation at the school level.

Data Analysis

Creswell (2009) characterizes mixed methods research as one that "focuses on collecting and analyzing both quantitative and qualitative data in a single study" (p. 210). Through the data analysis process of mixed methods study, the researcher must examine both qualitative and quantitative data to respond to the research questions. The data analysis of this study employing a mixed methods approach are detailed in this section.

Strategy Number: 1
Plan Number: 5
DATE: December 15, 2010

STRATEGY: We will purposefully hire, continually train, and hold accountable all District A staff to ensure the fulfillment of the District A mission and strategic objectives.
SPECIFIC RESULT: The practices of effective Professional Learning Communities are systemic in District A.

#	ACTION STEP (Number Each One)				
1	Allocate time within the work day for a minimum of one time per week for job-embedded learning for classroom teachers.				
2	Devise a standard PLC schedule for each school level.				
3	Define other employee groups who would benefit from the Professional Learning Community and determine the frequency for each group.				
4	District A will create intra-district PLC opportunities for single subject teachers (art, choir, ASL, etc.) to participate in district-level PLC's.				
5	The work of each instructional PLC will be anchored by the four critical corollary questions: What is it we expect students to learn? How will we know when students have learned it? How will we respond when students don't learn? How will we respond when students already know it?				
6	Create a district rubric for assessing Professional Learning Communities.				
7	To drive continuous improvement, analyze quantiative and qualitative data using Professional Learning Community rubrics at the team/ campus/ district level.				

Figure 4. District A Action Plan Number 5, Strategy 1.

Quantitative Analysis

The December 2016 PLCA-DS results from school-level and district-level staff were analyzed through an analysis of variance (ANOVA) to determine the relationship between the two. ANOVA is a statistical method used to analyze the similarities and among group means and to reveal whether there is a statistically significant difference between the group means. These groups constitute the independent variables and they are tested against a dependent variable (Iversen & Norpoth, 1987). In this study, two groups of dependent variables (school staff and district staff) were tested against the PLCA-DS, or independent variable. ANOVA is

used to determine whether there are significant differences among perspectives of school level and district level staff regarding the district's role in the implementation of PLCs in schools. Controlled variables including numbers or years of experience in the educational field and gender were added to provide descriptive statistical data.

Qualitative Analysis

Semi-structured interview questions through an interview protocol model were used to determine specific actions taken by district staff to support the PLC process. Upon completion of the recording, transcribing, and coding of these interviews of school and district level staff, emergent themes and patterns were identified. An interview protocol was utilized to ensure consistency of information gathered. The interview protocol is in Appendix A.

Emergent themes, codes, and categories were obtained from the five dimensions of a PLC and the three research questions. *A-priori* codes were defined by pre-determined elements from the research questions and set prior to the analysis of interview transcripts (Miles & Huberman, 1994). The set of codes related to district support of PLC implementation and development are listed in Table 1.

Assumptions

It was assumed all interview participants, both at the school and district level, have a working knowledge of the PLC framework due to practical application in their respective roles. Additionally, it is assumed survey respondents answered the PLCA-DS as accurately as possible due to the anonymity of the survey instrument. Finally, it is assumed District A and School A1 have an established PLC framework.

Table 1

A-Priori Coding

Code	Label	Definition	Description
1	PLC	"Professional educators working collectively and purposefully to create and sustain a culture of learning for all students and adults" (Hipp & Huffman, 2010, p. 12).	More specifically, five dimensions characterize PLCs: Shared Values and Vision, Shared and Supportive Leadership, Collective Learning, Shared Personal Practice, and Supportive Conditions (Hord, 1997; Hipp & Huffman, 2010).
2	District Leaders	Team composed of superintendent and other central office administrators	"District leaders create conditions and structures that guide and provide support for campuses throughout the system" (Tinsley, 2016, p. 54).
3	Culture	Peterson and Deal (1998) define culture as the underground stream of norms, values, beliefs, traditions, and rituals that have built up over time as people work together, solve problems, and confront challenges. This set of informal expectations and values shapes how people think, feel, and act in schools.	In the current study, I focused on culture as it relates to the five dimensions of a professional learning community as defined by Hord (1997). Cultural change is inherent in the development of PLCs. PLC development is a cultural change.
4	Systemic Change	The process of changing a system from one paradigm to another by applying systems thinking and systems theory. Systemic change is "fundamental change, affecting every aspect of our schools and every school in our school systems" (Holzman, 1993, p. 18).	In the current study, I focused on systemic change at the district and school levels and acknowledge the close connections of the improvement efforts between these two levels.
5	Systemic Approach	A systemic approach to school improvement is "the school district aligns its resources and strategies to confront common challenges and support effective solutions" (Knudson et al., 2011, p. 3).	Knudson et al. (2011) also note a systems approach requires differentiation based on the individual needs and contexts of schools.
6	Shared and Supportive Leadership	The first dimension of a professional learning community is "a shared and collegial leadership in the school, where all grow professionally." (Hord, 1997, p. 17).	Hord and Sommers (2008) characterize a "shared and supportive leadership relationship as one in which both administrators and teaching faculty possess shared decision-making power and authority" (p. 9).

(table continues)

Code	Label	Definition	Description
7	Shared Values and Vision	The second dimension of a PLC is "staff are encouraged not only to be involved in the process of developing a shared vision, but to use that vision as a guidepost in decision making about teaching and learning in the school" (Hord, 1997, p. 19).	"The vision grows as people work together over time. The community of professionals constructs a shared vision of the improvements that they will work toward for the increased learning of students," and shared values, are "the beliefs that guide the behavior of individuals" (Hord & Sommers, 2008, p. 8).
8	Collective Learning	The third dimension of a PLC is characterized as ongoing collaborative opportunities for staff "to learn to apply new ideas and information to problem solving" (Hord, 1997, p. 21).	"Continuous, embedded learning that requires consistent professional reflection, collaboration, and focus on student growth (Hord & Sommers, 2008, p. 12).
9	Shared Personal Practice	The fourth dimension of a PLC is described as "process is based on the desire for individual and community improvement and is enabled by the mutual respect and trustworthiness of staff members," in which teachers review and share their teaching behaviors in a highly collaborative manner (Hord, 1997, p. 25).	Shared personal practice is "demonstrated by the staff from all assignments as administrators and teachers and from all grade levels and departments (in schools), and from all levels of the organization -- coming together . . . to work collaboratively" (Hord & Sommers, 2008, p. 12).
10	Supportive Conditions	The fifth dimension of a PLC is "supportive conditions determine when and where and how the staff regularly come together as a unit to do the learning, decision making, problem solving, and creative work that characterize a professional learning community" (Hord, 1997, p. 20)	"Supportive conditions are two-fold involving both structural and relational factors that allow members of a professional learning community to work together effectively" (Hord & Sommers, 2008, p. 14).

Note. PLC–Professional Learning Community.

Ethical Considerations

In order to maintain ethical standards related to educational research, the following steps were taken. I completed the training requirements through the National Institute of Health and obtained certification. Additionally, I submitted an application to the University of North Texas Institutional Review Board to conduct this study and was approved. A copy of the approval is in Appendix B. No names of study participants including the selected district and campus site were

disclosed to maintain confidentiality. Finally, informed consent was obtained for all survey and interview participants, which explained their rights including the right to leave the study at any time. A copy of the informed consent is in Appendix C.

Limitations

There are several limitations to this study including the size and scope of the study since only one district and one school were examined. Another limitation exists in the study's limited timeframe; the study only focused on this district and school from December 2016 to September 2017. A third limitation is my limited first-hand experience in PLC development. I am in my third year of tenure as an elementary school principal, and I served as an assistant principal for six years and a teacher for 10 years. Although graduate studies over the past seven years significantly increased my awareness and understanding of PLCs, my current and past positions in this school and district may pose some biased limitations on the selection of study sites as well as on the analysis and reporting of results.

Trustworthiness

Trustworthiness in a qualitative study can be determined using four criteria 1) credibility, 2) transferability, 3) dependability, and 4) confirmability (Guba, 1981). For this study, the area of credibility and dependability were the main criteria used to establish trustworthiness. Credibility was established through member checking. Yin (2011) describes member checking as a research procedure that "permits the participants to correct or otherwise improve the accuracy of the study, at the same time reinforcing collaborative and ethical relationships" (p. 310). The member checking process allowed participants to review their interview transcripts to

ensure the information captured by the researcher was accurate and complete. Dependability was achieved primarily by utilizing the PLCA-DS instrument previously used in similar studies, measuring similar constructs. Furthermore, a reliability analysis was conducted based on December 2016 PLCA-DS results, yielding Cronbach's Alpha scores ranging from .973 for Dimension 3 and .955 for Dimension 2, affirming the dependability of the survey instrument.

Summary

In this chapter, I explained the research design, population and sampling, data collection, and data analyses used in this study to answer the research questions. Research questions, procedures, participants, and specific instrumentation were also included. In addition, I described the qualitative and quantitative data collection process and use of a mixed methods approach to enhance validity of results and to report the analysis of data.

CHAPTER 4

PRESENTATION OF FINDINGS

The purpose of this research was to understand the role of district leadership better in the implementation and development of professional learning communities. Specifically, in this study I explored the perceptions of school and district staff related to district supports and actions that are requisite for a successful PLC framework. In this chapter, I describe the results of this mixed methods study by examining the information and data provided by the qualitative and quantitative research methodology. The first aspect of the sequential exploratory mixed methods approach that will be discussed in this chapter are the quantitative results yielded by the administration of Professional Learning Communities Assessment-District Support (PLCA-DS). The PLCA-DS survey tool was administered to 78 school staff and 14 district staff with explicit experience and knowledge of the PLC framework. A copy of the PLCA-DS is in Appendix D. This survey resulted in quantitative data that are both responsive to the research questions and informative to the design of the qualitative interview protocol and question sets. In this chapter, the transcribed interviews of 9 participants including two central office administrators, two learning liaisons serving dual roles at the campus and district, and five school staff members including campus administrators, a learning leader or department chair, and teaching faculty are reported. The interview data are organized into the five dimensions of a professional learning community as defined by Hord (1997) and later expanded by Hipp and Huffman (2003, 2010), Hipp et al. (2008), and Olivier et al. (2009) expanded this research base. Hipp and Huffman (2010) reordered the five dimensions originally identified by Hord (1997) to "provide a holistic picture of how a PLC operates, as well as actions leaders need to take to create such a culture" (p. 13). In 2015, based on the initial survey results from the PLCA-DS, the dimensions were

recombined by Olivier, Huffman, and Cowan as: a) Shared and Supportive Leadership, b) Shared Values and Vision, c) Collective Learning and Application of Practice, d) Supportive Conditions (relationships), and e) Supportive Conditions (structures). Within these designations of the five dimensions of a PLC, the role of district and school leadership and the role of culture also emerge as important secondary themes. The analysis of documents related to the implementations and development of PLC frameworks served to strengthen the quantitative results previously yielded from the PLCA-DS and the qualitative information gathered from the interviews. Finally, the results from the survey, interviews, and document analysis are all responsive to the three research questions of the study:

1. What similarities and differences exist in perspectives held by district staff and school staff related to the implementation of PLC dimensions in schools?
2. From a district level point of view, what specific actions do *district staff* take to support PLC implementation at the school level?
3. From a school level perspective, what specific actions do *district staff* take to support PLC implementation at the school level?

Survey

The Professional Learning Communities Assessment-District Support (PLCA-DS) survey instrument was the first of three data collection approaches utilized in this sequential explanatory mixed methods study. The PLCA-DS was used as an assessment tool to measure both school and district staff members' perceptions of the role of district leadership in the development and implementation of PLC frameworks. The PLCA-DS survey was distributed to each study participant electronically using Qualtrics, an online survey platform. The survey was anonymous, collecting only IP addresses, and general information from the 92 study participants. The survey was organized around the five dimensions of a PLC, first established by Hord (1997),

and later expanded and used to develop the PLCA-DS by Olivier et al. (2015). Survey participants were prompted to respond to several attributes of each dimension on a 6 point Likert-type scale of 1 = *strongly disagree* to 6 = *strongly agree*. The resulting data was the participants' individual responses to the 67 statements related to the five dimensions of a PLC, as well as an average of each of the five dimensions. Additionally, I measured the similarities and differences of perceptions of district and school staff, the PLCA-DS data reported in this chapter includes these results.

The data in Table 2 are the collective results of the PLCA-DS administrations to both district and school level staff. This data exhibits the overall mean of their combined responses as well as the standard deviation. Factors one through five listed are representative of the five dimensions of the PLC.

Table 2

PLCA-DS Aggregate Results for School and District Staff

	M	*SD*	*N*
1: Shared and Supportive Leadership	4.7252	1.03938	92
2: Shared Values and Vision	4.9241	1.0265	92
3: Collective Learning and Application of Practice	4.5197	1.09783	92
4: Supportive Conditions (Relational)	5.0213	.99890	92
5: Supportive Conditions (Structures)	4.7969	1.04082	92

As evidenced by the results above, the combined responses from school and district staff related to each of the five dimensions ranges from 4.5 to 5.0. The lowest mean score was 4.5 for Dimension 3: Collective Learning and Application of Practice, and the highest combined average was 5.0 for Dimension 4: Supportive Conditions (Relational). Based on the 6 point Likert-type

scale, these results indicate that perceptions of District A and High School A1 staff reflect higher than average levels of district support for PLC structures and processes.

Table 3 displays a correlation table showing the relationship between the variables measured in the study including the five dimensions of the PLC. In this table, the data were not separated to determine similarities and differences between school and district staff. Rather, Table 3 represents an aggregate of the survey responses.

Table 3

PLCA-DS Pearson Correlation Chart for District and School Staff Combined

Demographics/ Dimension	Dimension				
	1	2	3	4	5
1: Shared and Supportive Leadership	1				
2: Shared Values and Vision	.911**	1			
3: Collective Learning and Application of Practice	.919**	.931**	1		
4: Supportive Conditions (Relational)	.890**	.890**	.910**	1	
5: Supportive Conditions (Structures)	.884**	.838**	.932**	.894**	1

Note. ** Correlation is significant at the .01 level (2-tailed).

The correlation between the variables of the study with school and district staff combined was calculated using a two-tailed Pearson correlation in SPSS. The correlations with two asterisks are considered statistically significant at the .01 level. There is a statistically positive relationship among several variables, most notably among all five dimensions. The strongest positive relationship is between Dimension 3: Collective Learning and Application of Practice and Dimension 5: Supportive Conditions (Structures) with a Pearson correlation coefficient of .932 indicating as the collective Likert-type scale score for Dimension 3 increases, so does the score for Dimension 5. In other words, ratings for each of the dimensions are positively

correlated, showing increases between each of the dimensions in relation to each other. In fact, the lowest positive correlation, still considered to be statistically significant is measured at .832 comparing Dimension 2: Shared Values and Vision with Dimension 5: Supportive Conditions (Structures).

Tables 4 and 5 show the results of a Pearson correlation with PLCA-DS survey participants separated by their respective groups that include district and school staff. Again, the correlation was conducted using Pearson's coefficient to determine relationships among the variables measured which included the five dimensions of a PLC. Similar to the results of all study participants in Tables 4 and 5, the results of the groups separated by district and school staff, also indicate several relationships that are positive and statistically significant. The range of Pearson's coefficient for district staff is from .491 to .901. District staff's PLCA-DS survey responses resulted in a .491 Pearson coefficient between Dimension 2: Shared Values and Vision and Dimension 5: Supportive Conditions (Structures). This was the outlier from the results displayed in Figure 5, as the only comparison of PLC dimensions among both groups that resulted in a non-statistically significant positive relationship.

Table 4

PLCA-DS Correlation Chart for District Staff

PLC Dimensions	1	2	3	4	5	*N*
Pearson Correlation	1	.764**	.749**	.682*	.726**	14
Sig. (2-tailed)		.004	.005	.014	.008	14
Pearson Correlation	.764**	1	.714**	.637*	.491	14
Sig. (2-tailed)	.004		.009	.026	.105	14
Pearson Correlation	.749**	.714**	1	.790**	.901**	14
Sig. (2-tailed)	.005	.009		.002	.000	14

(table continues)

PLC Dimensions	1	2	3	4	5	*N*
Pearson Correlation	.682*	.637*	.790**	1	.733**	14
Sig. (2-tailed)	.014	.026	.002		.007	14
Pearson Correlation	.726**	.491	.901**	.733**	1	14
Sig. (2-tailed)	.008	.105	.000	.007		14

Note. ** Correlation is significant at the .01 level (2-tailed).

Table 5

PLCA-DS Correlation Chart for School Staff

PLC Dimensions	1	2	3	4	5	*N*
Pearson Correlation	1	.932**	.938**	.918**	.902**	78
Sig. (2-tailed)		.000	.000	.000	.000	78
Pearson Correlation	.932**	1	.949**	.907**	.867**	78
Sig. (2-tailed)	.000		.000	.000	.000	78
Pearson Correlation	.938**	.949**	1	.922**	.935**	78
Sig. (2-tailed)	.000	.000		.000	.000	78
Pearson Correlation	.918**	.907**	.922**	1	.910**	78
Sig. (2-tailed)	.000	.000	.000		.000	78
Pearson Correlation	.902**	.867**	.935**	.910**	1	78
Sig. (2-tailed)	.000	.000	.000	.000		78

Note. ** Correlation is significant at the .01 level (2-tailed).

The results of the school staff were notably higher in their Pearson coefficients ranging from .867 to .949. The strongest positive relationship among PLC dimensions as reported by school staff was Dimension 2: Shared Values and Vision and Dimension 3: Collective Learning and Application of Practice.

Dimension 1−Shared and Supportive Leadership

Figure 5 displays the results of the 16 items assessed in Dimension 1: Shared and

Supportive Leadership. These results are shown separately for school and district staff. The overall results for each of the measured attributes are above score 4 (*somewhat agree*). Additionally, 13 of the 16 total statements yielded a score 5 (*agree*) with district staff. In each of the 16 assessed attributes, district staff rated them higher than school staff, with the largest difference noted in provided access to relevant data to school staff in order to make decisions about instruction, with district staff reporting a 5.58 mean and school staff 4.46.

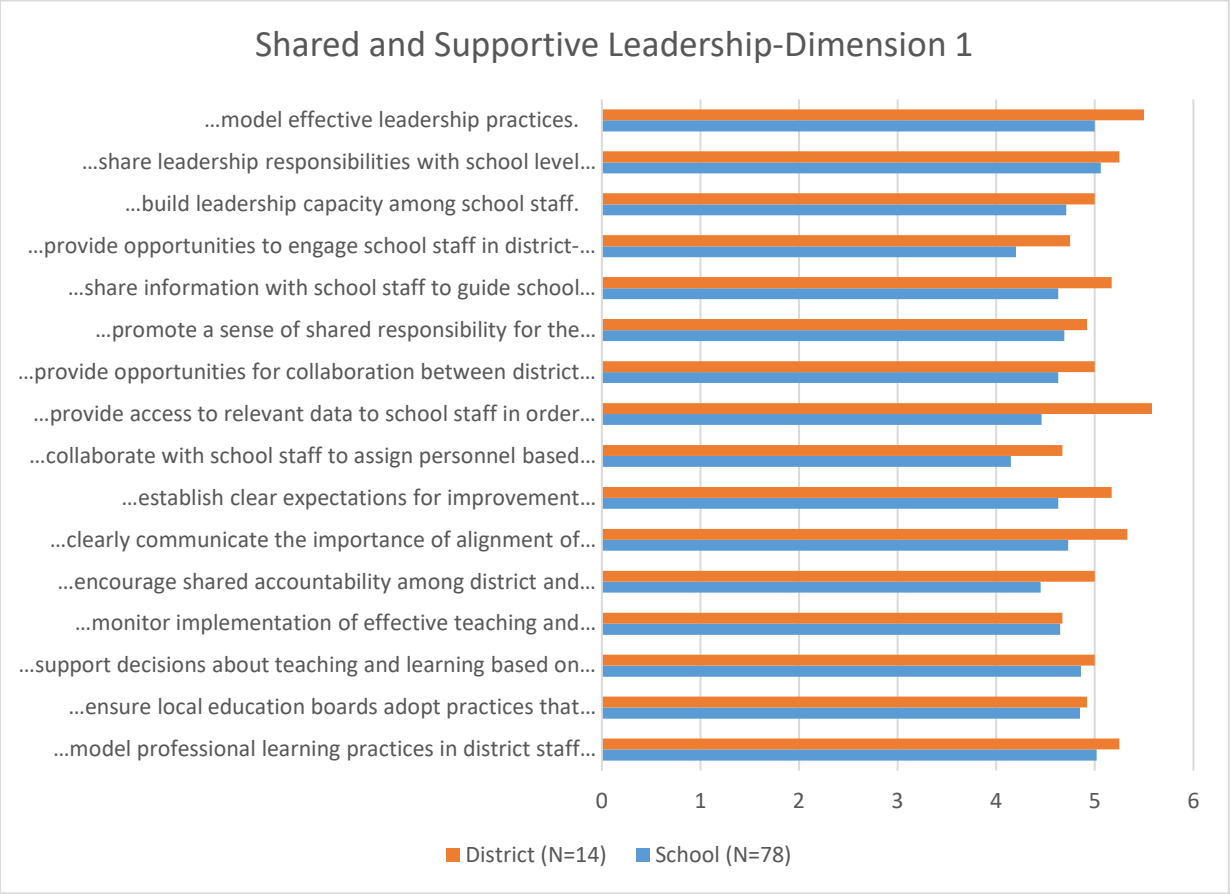

Figure 5. Shared and supportive leadership (District A).

The results of the PLCA-DS survey for both district and school staff is displayed in Figure 5. The first PLC dimension, Shared and Supportive Leadership, resulted in a range of responses from district staff from a mean of 5.58 for providing access to relevant data to school staff to a mean of 4.67 for collaborating with school staff to assign personnel based on school

needs. School staff results are notably lower in each of the survey items; however, there is some clear alignment between district and school staff responses, with the lowest mean of school staff reported at 4.15 for collaborating with school staff to assign personnel based on school needs. The highest average score from school staff in Dimension 1 was 5.06 for shared leadership responsibilities with school level administrators.

Dimension 2−Shared Values and Vision

Figure 6 displays the results of the eight statements assessed in Dimension 2: Shared Values and Vision.

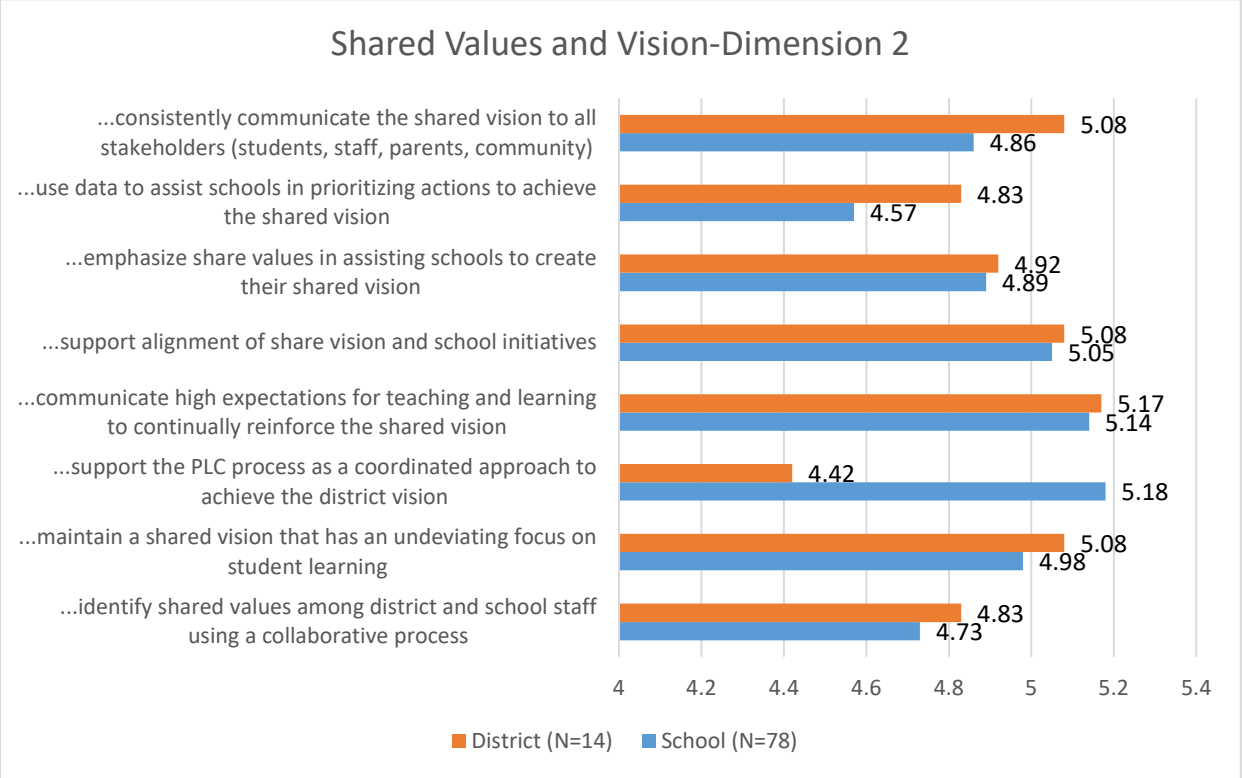

Figure 6. Shared values and vision (District A).

The highest mean reported by district staff was 5.16 when rating how district leaders communicate high expectations for teaching and learning to reinforce the shared vision

continually. The lowest average score of district staff was 4.42 in relation to supporting the PLC process as a coordinated approach to achieve the district vision. There is a misalignment evidenced between district and school staff in relation to this attribute, as it was actually the highest average score for school staff resulting in 5.18. Similar to the results for Dimension 1, district staff mean scores are higher than schools for seven of the eight attributes measured. Despite the differences noted, the mean of all eight attributes measured in Dimension 2 for school staff and district staff was identical at 4.93 respectively.

Dimension 3−Collective Learning and Application of Practice

Figure 7 reveals the results of the perceptions of both school and district staff in relation to the attributes of Dimension 3: Collective Learning and Application of Practice. Of the 21 characteristics assessed, 12 or a small majority resulted in higher means as reported by district staff. Additionally, the overall average for district staff was 4.64 as compared to the total average reported by school staff at 4.5. Many of the attributes were closely aligned between school and district staff with all but two ranging between 4 (*somewhat agree*) and 5 (*agree*). The two outliers reported by district staff were collaborate with school staff to implement curricula aligned to state standards that guide instruction at 5.58 and provide an induction program to assimilate new staff into the professional learning culture at 5.67. Each of these attributes would be more closely associated with the Likert-type scale (6) or *strongly agree*.

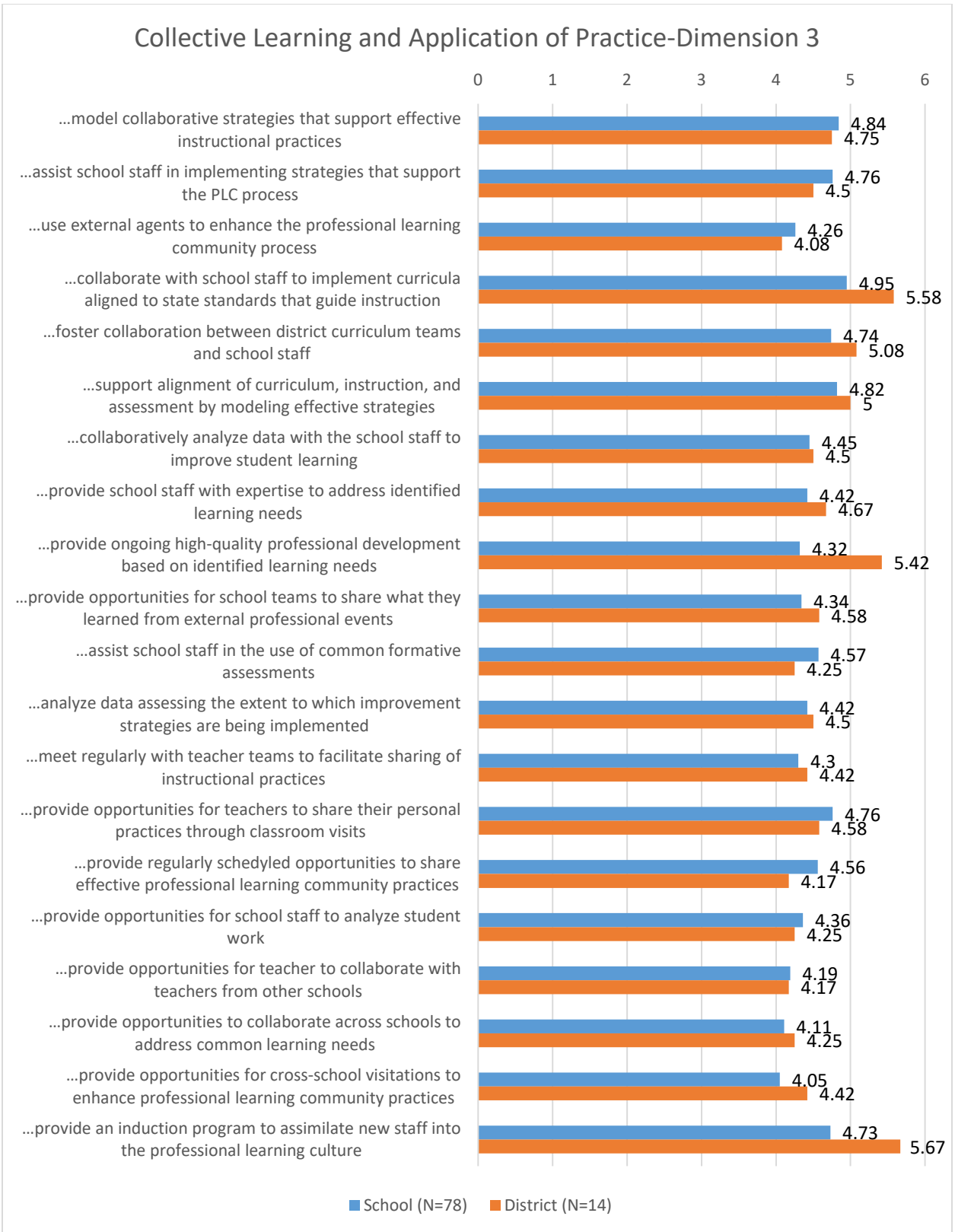

Figure 7. Collective learning and application of practice (District A).

Dimension 4−Supportive Conditions (Relational)

Figure 8 displays the school and district staff perspectives related to the fourth PLC dimension, Supportive Conditions (Relational). The overall mean score for district staff is measured at 4.98 with school staff's average score slightly higher at 5.1. Despite this small difference, there is clear alignment between staff and district responses in Dimension 4. All 10 attributes resulted in a score point of (5) or agree among both school and district staff.

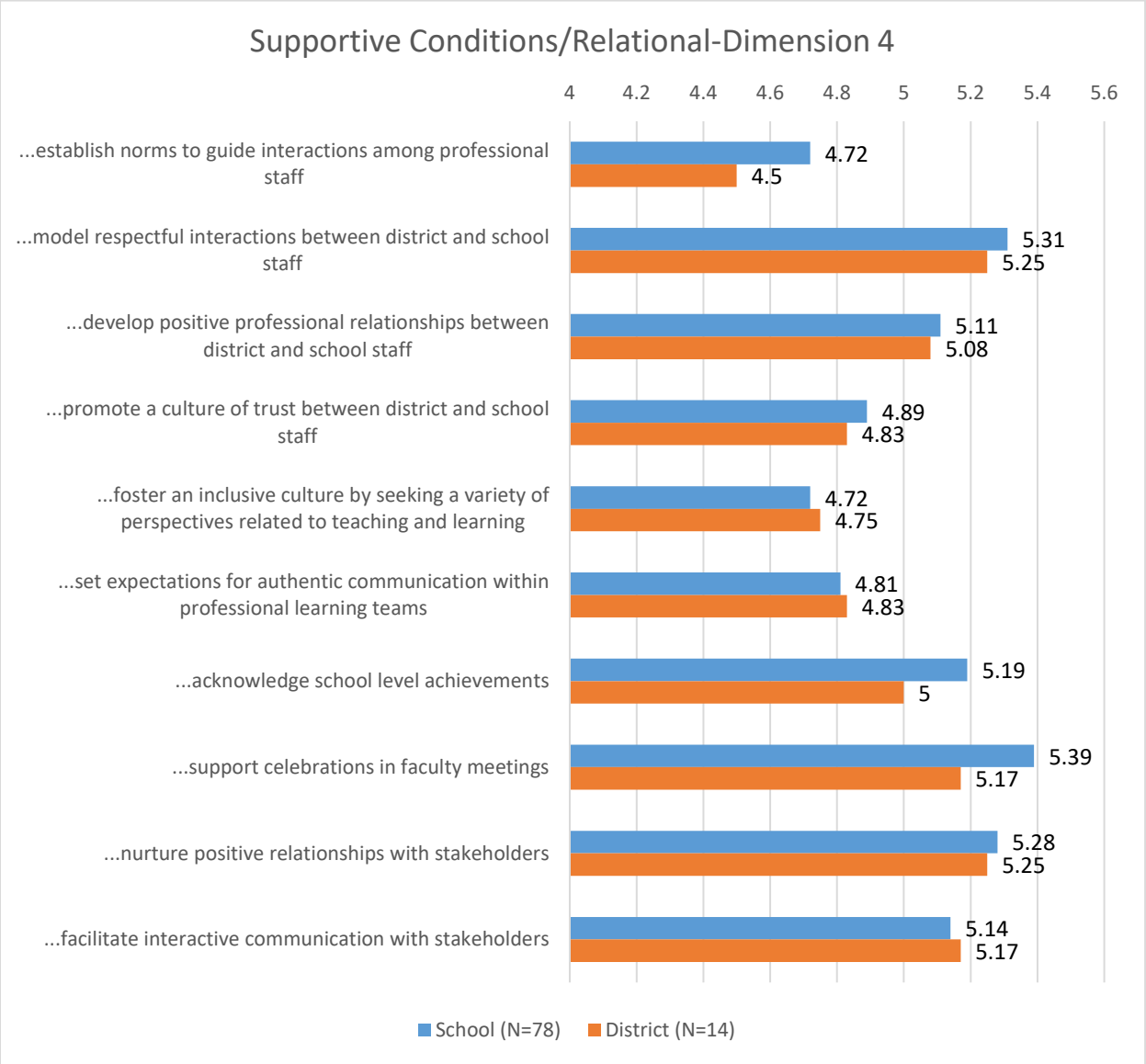

Figure 8. Supportive conditions/relational (District A).

Dimension 5−Supportive Conditions (Structures)

Figure 9 displays the perceptions of school and district staff related to PLC Dimension 5: Supportive Conditions (Structures). The average score for district staff is 4.9, while the school staff overall mean is reported at 4.77. Again, the perceptions of both school and district staff are aligned in their response to the characteristics described in Dimension 5 with all but two of the attributes resulting in a Likert-type score of (5) or *agree* between both groups.

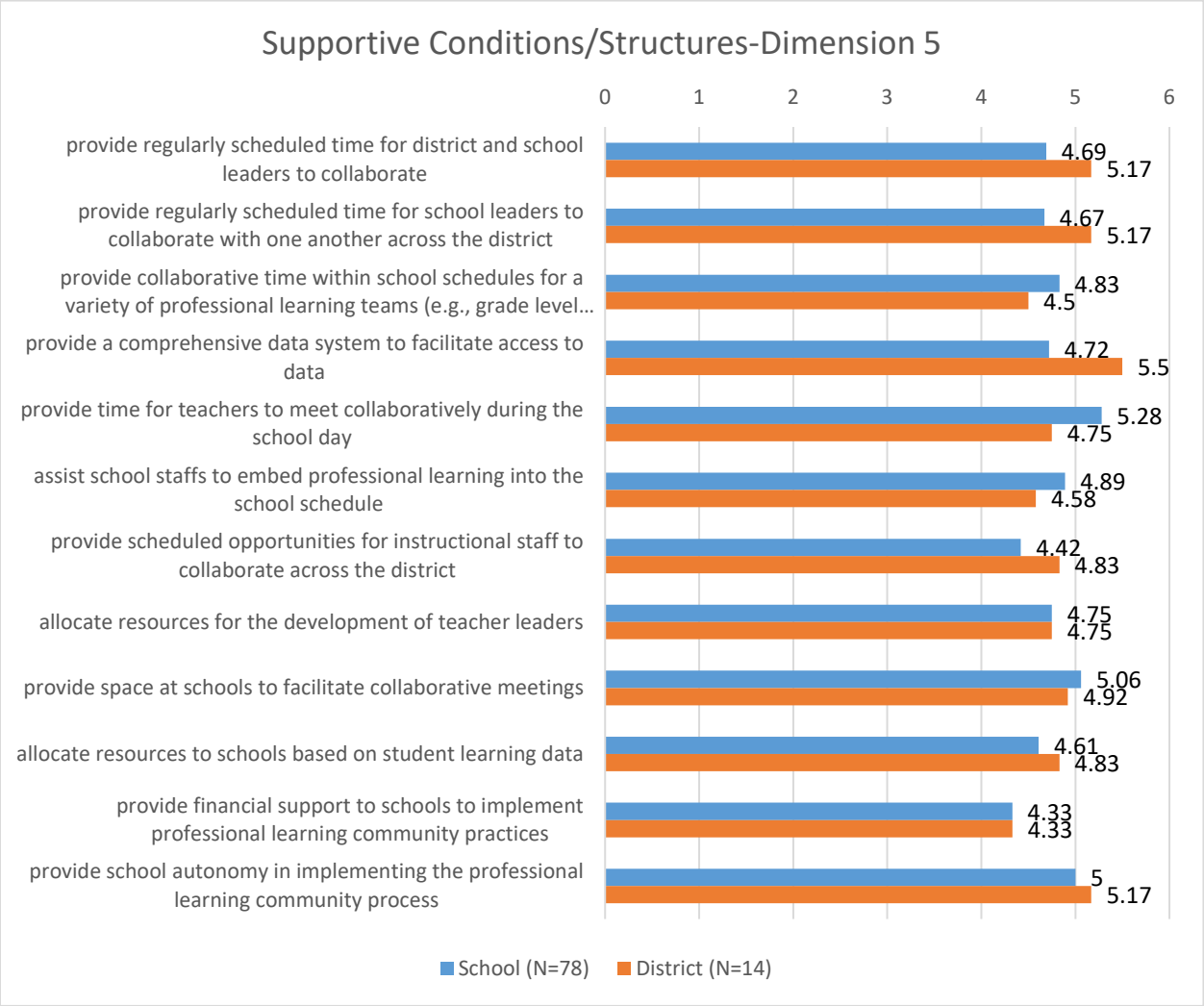

Figure 9. Supportive conditions/structures (District A).

The lowest scores of both school and district staff was a 4.33 respectively for providing financial support to schools to implement professional learning community practices. A score of

4.33 most closely aligned to (4) or *somewhat agree* as measured by the 6-point Likert-type scale used in the survey instrument. Additionally, district staff reported providing a comprehensive data system to facilitate access to data at 5.5, rounded to a Likert-type score of 6 or *strongly agree*.

District and School Staff PLC Dimensions Comparison

Figure 10 reveals the perceptions of school and district staff for each of the five PLC dimensions measured by the PLCA-DS. The overall average score for district staff was lower than the school staff average in Dimension 4: Supportive Conditions (Relational) and Dimension 5: Supportive Conditions (Structures). School staff and district staff mean scores for Dimension 2: Shared Values and Vision were identical at 4.93.

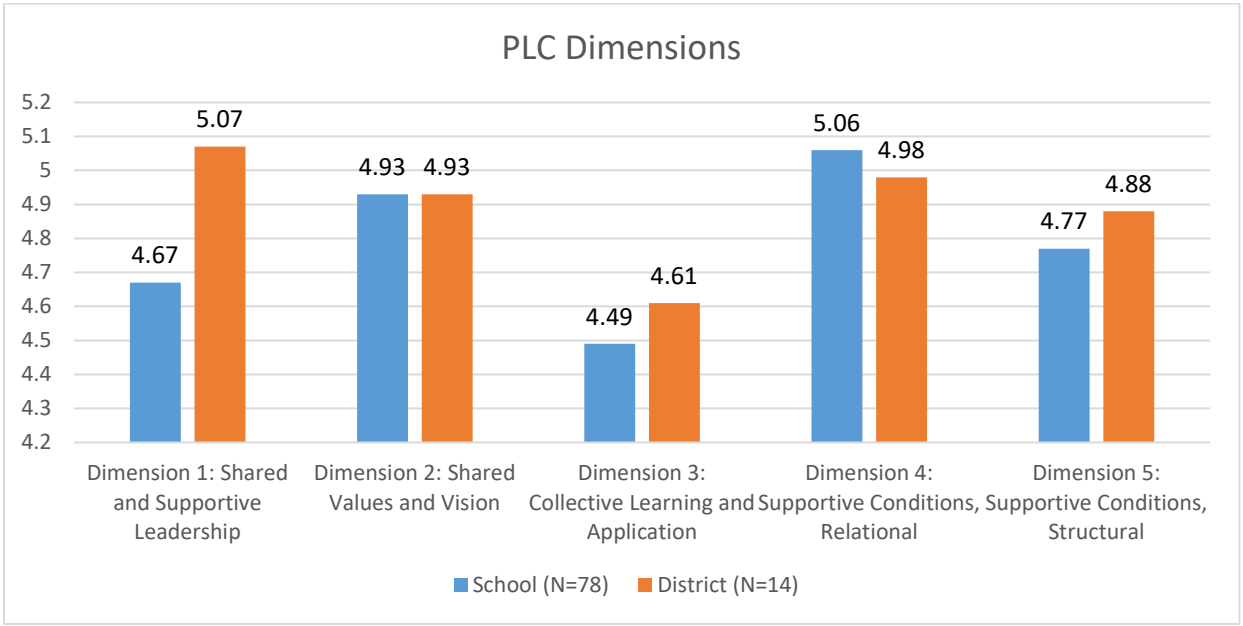

Figure 10. District and school dimensions comparison.

The results of the responses from the PLCA-DS survey indicate alignment among district and school staff, despite minor differences. Furthermore, this survey data indicates that perceptions of district support for the five dimensions of the PLC are consistently at the (5) agree

level as measured by the 6-point Likert-type scale. Some areas could be strengthened by district leadership as reported by school staff including Dimension 1: Shared and Supportive Leadership (4.67) and Dimension 3: Collective Learning and Application of Practice (4.49). However, there are also clear areas of strength evidenced by school staff overall averages for Dimension 4: Supportive Conditions (Relational) at 5.06 and Dimension 5: Supportive Conditions (Structures) at 4.77.

Interviews

The data collected from the interviews are based on the perceptions of two district level staff, two learning liaisons serving at both the district and school level, and four school staff members. The two district level staff members include a K-12 district math director (MD) and the executive director for professional development (ED) at District A. One of the learning liaisons fulfills her duties at the district and school level and works exclusively at the elementary level (LLE), while the other liaison works only at high schools (LLS). The school staff interviewed at High School A1 were the principal (HP), the associate principal (HAP), a learning leader for the English department (HLL), a team lead for the AP English Literature team (HTL), and an English teacher (HT). These data are divided into three sections of findings: (a) the PLC framework to support systemic improvement in schools, (b) leadership, and (c) the role of culture. The interview data reflect the main components of the conceptual framework of this study as outlined in Chapter 1.

Theme 1: PLC Framework to Support Systemic Improvement

The theme, PLC Framework to Support Systemic Improvement emerged from the five

dimensions of a PLC. The five dimensions originally identified by Hord (1997) were reordered by Hipp and Huffman (2010) to "provide a holistic picture of how a PLC operate, as well as actions leaders need to take to create such a culture" (p. 13). According to Hipp and Huffman (2010), organizations functioning as a PLC construct are evidenced by five dimensions: a) Shared and Supportive Leadership, b) Shared Values and Vision, c) Collective Learning and Application of Practice, d) Supportive Conditions (relationships), and e) Supportive Conditions (structures). These five dimensions provide a strong foundation for school improvement efforts. Mason (2003) defined systemic improvement as the use of "aligned systems of standards and instructional guidance at all levels of the educational enterprise to improve the quality of teaching and learning" (p. 3). Educational improvement, systemic in nature, requires the alignment of essential elements including standards, instruction, accountability, professional development, resources, and support to facilitate school improvement (Cowan et al., 2012; Mason, 2003). A PLC framework, built on the five dimensions of a PLC and aligned at multiple levels of a learning organization including the school and district, provides the foundation for systemic improvement. Each of the district staff and school staff interviewed described elements of a PLC framework that facilitated systemic improvement.

School District A adopted the PLC framework in 2010, resulting from a strategic planning process in 2010. In some districts, the district leadership supports PLCs as an improvement process; however, in most cases, the school leadership initiates them. Conversely, in the case of District A, the district level leader initiated PLC development in 2010 and charged both the school and district level leaders to implement and sustain a PLC framework. ED explained the effects of the PLC framework on school and district improvement.

> We've turned the corner completely in that campuses know that PLC meetings are for learning, and they may not be designing the agendas perfectly right. Of course, that's just

> my opinion, but the emphasis has shifted, and so I would say that's probably the biggest thing, in the sense that resistance to that notion of using data and really using that as an opportunity to design instruction according to kids' needs, that is pretty common. It's done a little bit differently from place to place in terms of who writes the agenda, how much time they have to complete the agendas, all that, but I think that's huge. And I think that can be attributed to our strategic plan. This is the first district that I've worked in where the strategic plan was something more integral than a binder on the shelf.

HAP described how the PLC framework has not only helped carry forward District A's mission, but also provided the necessary district level support to High School A1 needed to realize this collective goal.

> So as a district we have placed a lot of emphasis on collaborative work and the mission of our district to be the best, and we define that as building excellent schools together. So, the concept of PLCs and collaboration is something we've placed a lot of emphasis on. And the district's perspective, they have placed an emphasis on giving us the staffing we need to be able to run a schedule, a master schedule that creates time in the day for our teachers to collaborate. And so, I think from the district perspective, creating that vision of the best, and that's our mission, but then backing that up with the concept of time and resources and just people I think is the biggest thing that they've done to support us at the campus level.

Dimension 1—Shared and Supportive Leadership

Hord and Sommers (2008) characterize the first dimension of a PLC, Shared and Supportive Leadership, as "both administrators and teachers are engaged in shared decision-making" (p. 9). Interview participants at the school and district level reinforced the importance of empowering all staff regardless of position to lead within a PLC framework. MD expressed how the shift of the traditional department chair to a learning leader has been critical to the strengthening of this PLC dimension.

> So, the past 2 or 3 years it started much more structured and has been a little looser since then, we kind of redefined the role of the department learning leader to get away from the old department chair as a rite of passage to you are an instructional leader within your department. And there was a great deal of training that went around with that.

Along those same lines, the learning liaison, who supports both the district and schools

with PLC framework development, emerged as another key to Shared and Supportive Leadership and ultimately professional growth. LLE expresses how her role as a learning liaison has helped to empower the teachers she works with.

> It brings the mindset that everybody's learning, so no longer do we really have this isolated group of people who are the gatekeepers of all the knowledge, that if you want to know or do anything, you don't have to go seek permission or understanding which I think is so empowering to teachers.

Dimension 2-Shared Values and Vision

Shared Values and Vision is the second dimension of a professional learning community and critical to the strength of a PLC framework. Hord (1997) offered the following evidence of shared values and vision, "staff are encouraged not only to be involved in the process of developing a shared vision, but to use that vision as a guidepost in decision making about teaching and learning in the school" (p. 19). All nine interview participants echoed the necessity of shared values and vision as a fundamental component of a PLC framework. HP explained how the PLC framework and particularly shared values and vision support school and district success.

> But the big thing, it goes back to that vision and having those common sets of expectations and goals and norms as we work with our learning leaders I,s I think, what I think we have done well with and I think we continue to develop that and evolve with time on where we are. We have a changing school population, and I think it's important to continue to evolve our practices. And we're a traditionally successful high school, a traditionally successful district, so it's important to see the urgency in that, and just because we've always done it this way doesn't mean we can't continue to be innovative, and I think the PLC structure we have in place supports that.

LLS details the importance of shared values, norms, or non-negotiables that undergird the PLC framework, supporting its effectiveness.

> So, I would say the biggest thing that we have found for PLC work is to have some hard-set things that we will not bend on. We're not going to cancel PLCs, skip PLCs. We're

> not going to air business that can be done in emails. We don't need people to shanghai them. They can't be negative. All the things we've said we're not going to do those. You need to be on time. I mean, we've got to do some really basic stuff like that. That's had to be set in the groundwork.

Dimension 3-Collective Learning and Application of Practice

Successful learning organizations depend heavily on the ongoing professional development of its members. Integral to a viable PLC framework, collective learning via collaboration and opportunities for reflective practice, is articulated by interviewees. District A and High School A1 staff noted the multiple opportunities they are afforded to engage in meaningful learning opportunities, often led by internal staff and self-selected. TL describes how professional development gives staff opportunities to lead by presenting and also choose the training, which best meet their individual needs.

> So, what our school does, which I think is super cool, is they'll send out a schedule. These are all the professional development things that you can go to on this day. It's within our school, or over at High School A2. And so if I want to, I don't know, further my development in differentiation, I can sign up for a session about differentiation. So, we'll go to those, and so if you're particularly strong, if you're in your PLC—like I ask my PLC, "Is there anything that you want to lead at our next professional development?" And then I get with our Learning Liaison and let her know whoever wants to teach something, and then they put that on the schedule.

LLE also explained the professional development days changed to support collective learning and differentiated professional development.

> And they changed the learning institute or—well, they call it the learning institute—our professional development days where it's not just sit and get. We have breakout sessions and you choose what you need and you go and—yeah, so it's been very much tailored to the teacher, which has been great.

Within Dimension 3, as measured by the PLCA-DS, is application of learning or shared personal practice. Described by Hord (1997), shared personal practice is "a process based on the desire for individual and community improvement and is enabled by the mutual respect and

trustworthiness of staff members," where teachers review and share their teaching behaviors in a highly collaborative manner. LLE describes how the PLC framework has supported teachers' openness to sharing their teaching practices, through the establishment of a collaborative culture.

> Well, I think people are talking to each other more, which has been great. I think we—one of the things teachers run the hazard of is isolation and becoming an island, and several years ago that's what people wanted and they protected it because it was—there was such a defensiveness to sharing. And so, I think with this culture of collaboration and PLC it's really broken that wall down big time.

LLE further asserts shared personal practice is a positive outcome of the collaborative culture the PLC framework is facilitating at High School A1.

> They're doing a pineapple board, basically a weekly calendar where people put post-its up there of the cool things they're doing like I'm doing a Socratic seminar this day or whatever and if you're off that period you pull it and you just go in and watch. So, the doors have really opened and that's a direct result of this culture of being a team and a PLC.

HAP also discussed her belief that the PLC culture has supported an increase in shared practice among staff, citing the pineapple chart example shared by LLE.

> I think there's definitely more of a growth mindset between the teachers and it's that yearning to learn and wanting to grow and wanting to improve their craft. And, so, I see that more and more. Even just—I mean one of our teachers, they started the pineapple project…So, I definitely think the PLC culture is helping that.

Dimensions 4 and 5−Supportive Conditions (Relational and Structures)

The fourth and fifth dimension of a PLC, supportive conditions, is characterized by Hord (1997) as "supportive conditions determine when and where and how the staff regularly come together as a unit to do the learning, decision making, problem solving, and creative work that characterize a professional learning community" (p. 20). Hord and Sommers (2008) posit supportive conditions are two-fold involving both structural and relational factors that allow members of a professional learning community to work together effectively (p. 14). The

interview participants noted supportive conditions, both structural and relational, are a critical element of a viable PLC framework.

HAP, HP, TL and LLE all explained how time to collaborate is a supportive structure provided at High School A1. Specifically, HP discussed his goal of creating "the structure to support every teacher having the opportunity to collaborate."

> You know, our coaches, our athletic coaches, weren't always a part of the PLC period in the master schedule. It was a PLC period over the top of an athletic period, which turned into another athletic period. So, what we've done this year is be very intentional to separate the two, and that took looking at a different bell schedule. So, we evolved from a traditional block to a modified block, which gave us those sections back from coaches, which helped alleviate some of our class sizes, but the big thing was every coach is able to be a part of their PLC and we don't have to take them away from that.

TL explained how every teacher has a conference period every other day with their department team, allowing collaboration to take place organically.

> Every other day, we have—we all have sixth period conference. And we are able to meet anytime. In our department right now, that looks really causal, because we literally pretty much every sixth period, we're walking over to someone's room. And it doesn't become like an official meeting, but we will all gather around, and we're discussing ideas and then we'll end up sitting down, and it turns into a PLC. So, having that opportunity, I feel like, especially if you have teachers that you know are passionate, they're going to—if they have a common planning period, they're going to use it.

TL's admission that her department will choose to collaborate, even when there is no formalized expectation of a PLC meeting, reveals how the five dimensions of a PLC framework that support systemic improvement have been internalized. Essentially the PLC framework, made up of the five dimensions, is the way they function. As a learning organization, at both a district and campus level, the importance of each of the dimensions to the viability of a PLC framework was evidenced.

Connection to the Conceptual Framework

The relationship of the theme PLC Framework to Support Systemic Improvement to the conceptual framework is supported by Hord's (1997) five dimensions of a PLC: a) Shared and Supportive Leadership, b) Shared Values and Vision, c) Collective Learning and Application of Practice, d) Supportive Conditions (Relational), and e) Supportive Conditions (Structures). The interview participants repeatedly referenced the five dimensions of a PLC and how they support the systemic improvement process. Additionally, both campus and district leadership articulated the PLC framework as a vehicle for cultural change.

Theme 2: Leadership

The theme of leadership is supported by two subcategories: district leadership and school leadership. Effective leadership at multiple levels of a learning organization is closely connected to the aforementioned five dimensions of PLCs. Cowan et al. (2012) explained educational improvement requires complex changes to the entire process and commitment on several levels. The role of leadership at both the school and campus level emerged as critical elements of systemic school improvement within a PLC framework.

District Leadership

The role of a district in implementing PLCs system wide is a critical one. In the case study of Stamford Connecticut Public Schools, Thessin and Staar (2011) asserted districts play four key roles including:

1) Ownership and support–districts must involve teachers and administrators in developing and leading the PLC process.
2) Professional development–districts must teach administrators and teachers how to work together effectively in PLCs.

3) Clear improvement process–districts must show how PLCs fit into the district's improvement process, so each PLC's work fits into an overall plan.

4) Differentiated support–districts must support schools according to their unique needs to help them move to the next step in their PLC growth.

I evidenced each of the four key roles of district leadership identified by Thessin and Starr (2011) in the interviews collected in District A. The first element of ownership and support requires district to engage all school staff actively in the development and leadership of PLCs. When describing the current ownership of PLC practices at the school level, EDL offers, "there's much more ownership on campuses of their practices. The downside to that is the ownership that the campuses have is very dependent upon the capacity of the leadership." The challenge lies in providing ownership but also the supports needed to ensure the effectiveness of a PLC framework. LLS describes her role in this process, by gradually releasing the responsibility of leading PLCs to teaching faculty rather than a learning liaison or campus administrator.

> So, last year we started with, okay, we're going to do the first two PLCs, but you're really in charge, and then you're going to jump in. And this year it was this is your PLC. I'm a support person. I'm a resource. If you would ever like me to host or lead, I'm available. . . .
>
> So, I'm bound to my campus Monday through Thursday, every day at the same time for PLCs, and what became really interesting is that they really want to step up and lead, and they've not been allowed to do it for long enough that now they're ready to take that ownership, and so what I did when I met with them initially is said, these are kind of the non-negotiables.

The second key area of focus for district leadership's role in the development of a PLC framework is professional development. DM discussed her role as a district leader related to this critical professional development.

> So, from a district standpoint, I meet with all of the department learning leaders in our secondary schools on, probably on about an every six weeks basis, monthly would be a little more often than we meet I think. But in our meetings together, I'm providing them with information and instructional resources to take back to their PLC groups. We have an expectation that the instructional coaches be invited to the PLCs so that they have a way that they can work with teachers through PLC and have the pulse of what's going on

> at the campus level. Oftentimes our instructional piece is looking at data and looking at data from a district point of view and then how would you go back to your campus and look at this from the campus point of view. Sometimes it is talking about instruction. The question I left them with this last time was what is mastery and how is it observable and asked them to take that question to their PLC and bring it back for our group to discuss and think about that as we move forward in our work defining what a learning platform is, really getting at, and how teachers might employ differentiation in order to better foster mastery in their classrooms.

HAP also reflects on how district leadership supports professional development that aligns with the development of the PLC framework in High School A1.

> I would say more from, like, my leadership from our principal. He provides a lot of support. And I think, more so, it trickles down from the district level, their expectations. And so, he brings it to me and it's more of "We're going to really incorporate the district and campus vison in our PLCs and what that looks like." So, I feel like I get it more directly from him than I would the district level.

Transparency of the PLC framework and how it fits into improvement efforts is the third key factor district leadership must address. As HAP stated, there is a clear alignment between district and campus goals as related to PLCs. PLCs, as a non-negotiable framework, are something clearly and consistently communicated and supported by District A according to HP.

> Like I said earlier, our district has been really committed to the PLC structure all the way to the point of bringing the DuFour's into the district to help create the PLC structure that we have. We place a great emphasis on it, so there are very little barriers that come from the district office, and it was not the norm. It would definitely be outside the norm.

The fourth key roles of district leadership in facilitating the development of a PLC framework is the provision of differentiated support. All campuses are in different places in regards to the development of their PLC structures and processes. Therefore, it is critical for district leadership to be responsive to the individual needs of schools as their PLC framework develops. EDL acknowledges the differences of PLC frameworks among campuses within District A. She explains how they are using the PLCA-R as an assessment tool to determine

where each campus is with respect to their development of the five dimensions of a PLC. Using that data, they can be specific in the support they provide to campuses.

> Well, the PLCA-R would probably be the most formal one that we've used. We did that with all of our departments in secondary as part of that DLL (District Learning Leader) training that we did. I think the most recently we did that was the beginning of the year. I think we had done it once before that, depending on the campuses and the principal's readiness for it, because again, the principal is sort of the gatekeeper. The principals who are most open to C & I, and the most open to examining practices for PLCs, are the ones where we have, you know, kind of plugged our work into that first.

EDL communicated in this interview excerpt, while district leadership is integral to the development of a viable PLC framework, the role of school leadership cannot be underestimated.

School Leadership

In this study, the role of school leadership, particularly the campus principal, in the development of the PLC framework was a notable theme in interviews from campus and district staff. HP, the principal of High School A1, described his role in creating a shared vision centered on student learning.

> I think the role of the principal is to create and align a vision that supports student learning, and I think everything that falls under that is the role of the principal. But I think when you talk about an organization that has 2,100 kids and 200 staff members, that places a great emphasis on that vision and aligning it to goals and getting everybody on the same boat headed in the same direction.

HT characterized the role of campus administrators in PLCs as one of a supporter not leader, with a non-evaluative stance.

> And so, with our administrators, and how they interact within our PLCs, they are there for the PLCs, I guess if they want to be, because they haven't been for every PLC but sometimes they are there and they are participants but in a way that active listeners are participants. And so that is very helpful I think that we are not sitting and talking to an administrator who sits in a different space in the power hierarchy that while the administrators here are great, we still feel, we still know who-we know that chain of command, so that they're active listeners and that they show up when we need them to,

> they participate when we need them to and they don't commandeer space is very, very helpful.

Connection to the Conceptual Framework

The theme of district and school leadership is a critical component of the conceptual framework of this study. Leadership at both the school and district level is critical to the establishment and development of the PLC framework that supports school improvement. "Leadership from the central office matters–both in terms of raising student achievement and in terms of creating the conditions for adult learning that lead to higher levels of student achievement" (DuFour & Marzano, 2011, p. 87). DuFour and Marzano asserted "effective leadership centered on clearly communicated goals for improvement at district level is needed to firmly root the PLC process at the school level" (p. 89). This relationship of alignment between district and school, carried out by effective leadership, was a repeated theme of the interviews conducted. From teachers to campus and district level administrators, there was an understanding of the critical role leadership played in the effectiveness of a PLC framework in improving student learning.

Theme 3: The Role of Culture

Culture, like district and school leadership, permeates throughout the five dimensions of a professional learning community. Anderson et al. (2012) defined culture as "common values and norms of work," critical in systemic improvement (p. 415). A viable PLC framework is dependent on the establishment of a student-centered, collaborative culture that possesses the five traits outlined by Peterson and Deal. The presence of a student focused culture and

associated attributes were consistently expressed during interviews with District A and High School A1 staff.

Common Purpose

The first characteristic of a student-centered culture, according to Peterson and Deal (1998), is the presence of a common purpose resulting in high levels of staff commitment. DM expressed how the PLC framework strengthened collaborative culture and united staff in the common purpose of improved student outcomes.

> So, as far as the district is concerned, the fact that every campus has dedicated time devoted to PLC means that as a district, we value a collaborative culture. We don't want teachers going in their classrooms and behaving as if they teach in a silo because these are all our students. Even if they're not in my classroom, they are our students and that ability to talk to one another and bring those issues out in PLC and saying, "Hey guys, I'm having a whole lot of trouble with X," or "I'm looking at the data and your kids did so much better on Y, what did you do? So that conversations are fostered.

HP echoed the PLC framework helped to establish a common goal of improved practice through a collaborative culture.

> I think it's created a common level of expectation and collaboration. I think people are very willing and open to feedback and suggestions and the opportunity to collaborate. If you walk in our workroom right now there's a pineapple chart displayed and that is teachers inviting other teachers into their classrooms. And I think that wouldn't have happened without a solid PLC structure to where people felt comfortable. So, I think you look at the collaboration piece, and what we have modeled as a collaboration piece, as a team, I think, has continued to foster that culture and fosters the idea of it's okay. We're not evaluating you in your PLC. It's okay to ask for help and it's okay to want to be a better teacher, and the PLC is a great model to do that if implemented correctly.

HTL described the culture of High School A1 has been shaped in part by feedback from students, again reinforcing student-centered culture unites all staff: "Which I guess becomes the culture of the school, because our students frequently give us feedback that we, especially in the English department, that we are unified, that we all have the same goals."

Underlying Norms

Evidence of underlying norms such as collegiality, improvement, and hard work is the second characteristic of a student-centered culture, according to Peterson and Deal (1998). Cowan (2003) asserts norms are rooted in the common vision and goals for improved student achievement. The interviews indicated these norms are an integral part of the PLC framework at High School A1. HT, a first-year teacher at High School A1, offers his perspective on norms and collegiality.

> I think part of it is the way that we–the norms we have established within teams and the norms that we have established interdepartmentally within those PLCs that keeps those—Because we're not all friends, it's different than we're all just very good friends, we're all very collegial, we all like working together, we also happen to be friends but the collegiality amongst every participant in the PLC I think is what sustains how well the department works together.

HT recognizes these norms, that emerged from a PLC framework, support the collegiality and effectiveness of his team and department's collective work. Similarly, LLE discusses her role as a learning leader in the goal setting process with her team, ensuring they are aligned to the team's shared values.

> We did a book study this summer on how to establish that—the—to identify the values of your department and then align them with goals. So, one of the things that I took back from that was to take to my department where we actually sat down and identified what our common values are as a team. And so then our goal from that was then to—any decision we make or goals that we set are going to be aligned with our values and so it makes decision making a little easier.

The importance of norms was described by LLE in her dual role as a learning liaison, supporting an elementary school, while receiving specialized training at the district level to support the PLC framework.

> Sure, so part of that is just norms within our campus, especially within our campus. So, we establish that together at the beginning of the year. And, most of our norms function off of that. My goal, since our PLC structure this year is different, is to allow PLCs to kind of tailor those to themselves. Again, with that autonomy piece, y'all may want

> things to be a little bit different. So, letting them structure that a little bit as well, but I think it's more of just giving them an opportunity to have that conversation, their expectations for themselves in a learning environment, and then providing a way to hold each other accountable to those, no matter what it is.

Connection to the Conceptual Framework

Cultural change is inherent in the development of PLCs. PLC development is a cultural change. This cultural change within each school is key to system-wide change and improvement.

To realize organizational change, district leaders must address both individual and organizational needs and contexts and often use change facilitators (Hord et al., 1987). Principals, as change facilitators must possess the ability to gauge individual and organizational needs. School leaders shape the school culture and shared beliefs, practices, and norms. From the data collected through the interviews of school and district staff, cultural change was evidenced by the attributes of culture, school leadership, district leadership, and the five dimensions of a PLC.

Summary of the Interview Data

The two central office administrators, two learning liaisons serving a dual role at both campuses and the district, and the five faculty and campus administrators interviewed in this study shared their perceptions regarding the PLC framework. Each interviewed participant shared their personal experience with PLC implementation. Despite different roles, they each articulated similar understandings of the five dimensions of a PLC and the resulting cultural change. There were some slight differences in perspective, based on experience or role, as related to district and school leadership's role in PLC implementation; however, there were very few noted. Finally, the specific actions of district and school leaders required to facilitate a

viable professional learning community framework based on interview perspectives of school and district staff are represented in Table 6 below.

Table 6

Specific Actions of School and District Leadership to Support PLC Framework

Leadership	Specific Actions
School	• Provision of resources, such as time for collaborative planning • Opportunities for shared leadership via learning leaders • Aligning district and school vision collectively • Creating and developing a culture that supports shared practice • PLC framework development evidenced in district improvement plans
District	• Provision of resources, such as professional development and personnel • Fostering a collaborative culture throughout the district • Establishing a shared vision that clearly communicates PLC importance • Autonomy given to school leaders in the implementation of PLC framework • PLC framework development evidenced in district improvement plans

Document Analysis

Document analysis provided the third research process required to achieve triangulation with the survey and interviews. The Lead 2021 Strategic Planning documents and subsequent action plans related to PLC implementation served as a primary source of evidence to evaluate the role of the district in PLC framework implementation and development. A copy of the Lead 2021 Strategic Plan is in Appendix E. The primary data sources collected for the document analysis were collected in advance of the interviews; however, some of the secondary sources such as job descriptions, curriculum planning guides, and PLC agendas were collected following the completion of interviews. The primary and secondary document analysis sources collectively support the conceptual framework of this study. Figure 11 displays the relationship

among the document analysis sources related to PLC implementation reviewed during the course of this study.

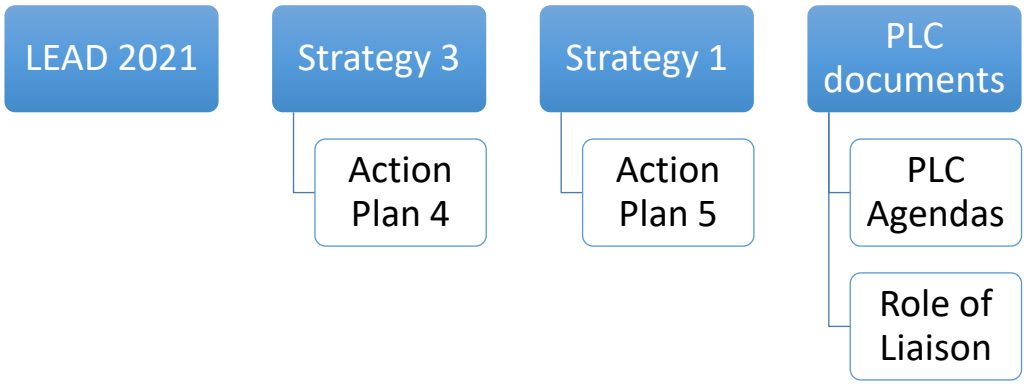

Figure 11. Document analysis sources.

There were two Lead 2021 strategies and two action plans reviewed during the document analysis process. A copy of the Lead 2021 Strategic Plan is in Appendix E. Strategy 1, "We will purposefully hire, continually train, and hold accountable all staff to ensure the fulfillment of District A's mission and strategic objectives," followed by the specific result, "The practices of effective Professional Learning Communities are systemic in District A." Finally, the resulting Action Plan Steps include:

1) Allocate time within the work day for a minimum of one time per week for job-embedded learning for classroom teachers.

2) Devise a standardized PLC schedule for each school level.

3) Define other employee groups who would benefit from a Professional Learning Community and determine the frequency for each group.

4) District A will create intra-district PLC opportunities for single subject teachers (art, choir, ASL, etc.) to participate in district-level PLCs.

5) The work of each Instructional PLC will be anchored by the four critical corollary questions: What is it we expect students to learn? How will we know when students have learned it? How will we respond when students don't learn? How will we respond when students already know it?

6) Create a district rubric for assessing Professional Learning Communities.

7) To drive continuous improvement, analyze quantitative and qualitative data using Professional Learning Community rubrics at the team/campus/district level.

Strategy 3, "We will transform from a teaching platform to a learning platform by designing engaging, differentiated work for students toward the accomplishment of District A's mission and strategic objectives," followed by the specific result, "All instructional leaders will be involved in a PLC group that meets regularly to plan for student engagement and differentiation and be accountable for the PLC's learning and planning." The Action Plan steps are:

1) All PLC groups will develop a plan for professional learning around the topics of engagement and differentiation.

2) PLC SMART Goals will reflect their focus on student engagement and differentiation.

3) PLC members will examine student work and levels of student achievement as well as assess levels of student engagement and collaboratively reflect on the evidence collected.

4) All PLC groups will be provided adequate time on a regular basis for collaboration.

5) Develop an accountability plan for all PLCs.

6) PLC time will be documented and shared.

7) Central administration departments will create job-alike PLC groups for personnel who do not have the opportunity to collaborate on a campus level.

8) Campus and district administrators will be involved in all PLC efforts through implementation, attendance, communication, and follow-up.

9) Each campus will develop a systematic method of documentation of collaborative meetings and activities.

10) Educators will use technology to initiate and share ideas to facilitate the design of differentiated and engaging work for students.

11) Educators will use technology to initiate and share ideas to facilitate the design of differentiated and engaging work for students.

12) Develop a central repository for PLC collaborative work/information so that all district schools can access the information and leverage ideas across campuses.

The Learning Liaison has a dual role, bridging individual schools and the district. It was established at the outset of PLC implementation to ensure a viable PLC framework exists on the campuses. According to the job description shown in Appendix F, a learning liaison "is to support the work of the principal by supporting teachers in improving instruction in every classroom, through coaching, consulting, collaborating, and co-teaching with teachers as well as aligning professional learning with district and school goals." Additionally, many of the specific responsibilities of this role relate directly to PLC development including: 3) support instructional staff to ensure that student achievement data drives instructional decisions at the classroom and school level; 5) collaborate with teachers to ensure instruction is aligned with curriculum and meets the needs of all students, and 6) collaborate with classroom teachers to increase the quality and effectiveness of classroom instruction through: PLCs, professional learning, and coaching teachers. A PLC agenda provided by a learning liaison that was interviewed is another piece of evidence that supports their role in the PLC process. The documents collected and analyzed support district-wide efforts to create a viable professional learning community framework, facilitating systemic improvement of schools.

Summary

The school and district staff who participated in this study whether through the PLCA-DS survey or interviews provided valuable insights into the PLC framework in District A. Their collective perceptions reinforced the district's consistent support of PLC framework development. The data collected provided a deeper understanding of the PLC framework, the five dimensions of a PLC, school and district leadership, and cultural change. The

commonalities that emerged through these analyses are the basis for Chapter 5: Discussion, Conclusions, and Recommendations.

CHAPTER 5

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Discussion of Findings

In Chapter 5 of this study, I provide the presentation of data including perceptions of district and school staff regarding professional learning community (PLC) implementation in schools, and their perceptions of specific actions of district staff in support of the PLC framework to facilitate systemic improvement. Based on the information gathered and analyzed in this study, conclusions will be offered. Also, in the recommendations section, additional questions are listed and other potential research related to this study are noted.

The purpose of this research was to understand the role of district leadership better in the implementation and development of professional learning communities. Keeping with the purpose of the study, I focused on capturing the similarities and differences among district and school staff related to the implementation of PLC dimensions in schools. Additionally, I examined district and school staff perspectives regarding the role of district leadership in PLC framework development. Data collection for this study included the administration and quantitative analysis of the PLCA-DS survey to both school and district level staff, nine interviews of school and district staff, and document review. To provide focus for this research, the listed questions were posed:

1. What similarities and differences exist in perspectives held by district staff and school staff related to the implementation of PLC dimensions in schools?
2. From a district level point of view, what specific actions do *district staff* take to support PLC implementation at the school level?
3. From a school level perspective, what specific actions do *district staff* take to support PLC implementation at the school level?

The discussion is organized into sections addressing each of the three research questions of the study. The three research questions, combined with the three emergent themes discussed in Chapter 4, (a) PLC framework to support systemic improvement, (b) school and district leadership, and (c) the role of culture, align with the conceptual framework of the study. Through this discussion of results, the role of district leadership in PLC development, and the PLC framework as a vehicle for systemic improvement of schools is also described.

Research Question 1

With the first research question of this study, I sought to examine the similarities and differences of perspectives held by district staff and school staff related to the implementation of PLC dimensions in schools. This research question was addressed in part through a quantitative analysis of PLCA-DS results. The quantitative analysis was conducted using a Pearson correlation comparing school and district staff responses to the PLCA-DS instrument across the five dimensions of a PLC, comparing perceptions of school and district staff for each of the five PLC dimensions. The overall average score for district staff was lower than the school staff average in Dimension 4: Supportive Conditions (Relational) and Dimension 5: Supportive Conditions (Structures). School staff and district staff mean scores for Dimension 2: Shared Values and Vision were identical at 4.93.

The results of the responses from the PLCA-DS survey indicate alignment among district and school staff, despite minor differences. Furthermore, this survey data indicates perceptions of district support for the five dimensions of the PLC are consistently at the (5) *agree* level as measured by the 6-point Likert-type scale. Some areas could be strengthened by district leadership as reported by school staff included Dimension 1: Shared and Supportive Leadership

(4.67) and Dimension 3: Collective Learning and Application of Practice (4.49). However, there are also clear areas of strength as evidenced by school staff overall averages for Dimension 4: Supportive Conditions (Relational) at 5.06 and Dimension 5: Supportive Conditions (Structures) at 4.77.

One interesting finding from the results of the survey was that the district consistently resulted in higher or equal to the results of school staff in four of the five PLC dimensions measured. The only outlier where school staff rated district support higher was Dimension 4: Supportive Conditions (Relational). In this dimension school staff surveyed resulted in 5.06 as compared to 4.98 for district staff. Following this discovery, I shared the results with EDL of District A and asked for her opinion regarding this difference. She relayed the idea that despite PLCs initiating from the central office level, district staff for the most part are removed from the inner workings of the PLC framework. This distance, in her estimate, is most likely reflected in Dimension 4, since it deals directly with relational supportive conditions. While central office is able to discern their level of support for supportive conditions related to structures such as time and resources, the relational component is more difficult to quantify, due to its qualitative nature.

Research Question 2

Using the second research question of this study, I explored district staff's perspectives on the specific actions of district staff related to PLC implementation at the school level. This research question was addressed primarily through a qualitative analysis of interview data. The emergent themes were: a) PLC framework to support systemic improvement, b) district and school leadership, and c) the role of culture. Additionally, the action plans related to PLC

implementation as well as the job description of a learning liaison, examined in the document review process, helped to inform this research question.

Research Question 3

With the third research question of this study, I examined the school staff's perspectives on the specific actions of district staff related to PLC implementation at the school level. This research question was addressed primarily through a qualitative analysis of the interview data. The emergent themes were: a) PLC framework to support systemic improvement, b) district and school leadership, and c) the role of culture. Additionally, the action plans related to PLC implementation and a PLC agenda template, reviewed during the document analysis, informed this research question. A copy of the PLC Agenda is in Appendix G.

PLC Framework to Support Systemic Improvement

The theme, PLC Framework to Support Systemic Improvement, connects to the five dimensions of a PLC, which are at the core of this study. Using Hord's 1997 definition of the five dimensions of the professional learning community (reordered by Hipp & Huffman in 2010) as a benchmark for evidence of professional learning community in schools, I measured perceptions of a school district's support for implementing PLCs at the school level using the five dimensions. Furthermore, the essential basis of this study focused on the role and perceptions of the school and the district in the establishment and development of the PLC framework or five dimensions of the PLC.

PLCs were initially introduced in District A in 2010. The implementation of the PLC framework began at the district level and was facilitated in large part via learning liaisons who

support PLC development of schools in coordination with the district. This dual position served a critical role in bridging the district and schools within the development of a viable PLC framework, evidenced by the five dimensions of PLC. Another key factor in the development of the PLC framework as support to systemic improvement, was through the strategic planning initiative, LEAD 2021, which began in 2011. Two strategies, and subsequent action plans resulting from this initiative, directed at PLC implementation and development, further served to provide structure to the PLC framework.

District Leadership

District leadership is simply a part of the larger system. When it aligns with beliefs, commitments, and norms through a shared culture, it ". . . can act as a powerful integrating force that limits variability among schools, particularly when culture is embedded in organization structures and systems" (Anderson et al., 2012, p. 416). In the context of this study, District A's leadership with PLC implementation evidences the value of a systems approach. As noted by Cowan et al. (2012), the district's role of "establish[ing] local educational priorities and help[ing] maintain the focus on improving student learning" is a vital element of the school improvement process via a systems approach (p. 9). The strategic planning process and resulting actions plans via the Lead 2021 initiative helped realize this goal. Additionally, the district's mission, of inspiring, encouraging and empowering students to achieve their full potential in a global society, reinforces the student-centered culture essential to the PLC framework.

Knudson et al. (2011) describe a systemic approach to school improvement as "one in which the school district aligns its resources and strategies to confront common challenges and support effective solutions" (p. 3). Knudson et al. also note a systems approach requires

differentiation based on the individual needs and contexts of schools. Data from the interviews indicated District A is aware of the differences and varied needs of individual campuses, and does not prescribe to a one size fits all approach. HAP described the latitude given to teachers in High School A1.

> And they have a lot of autonomy. I'm not used to that, so it's kind of cool to see what they do with it, because they really –I mean, they get to pick what's best for the kid. And they have, you know guidelines, but they really get to choose what they feel like is best for their kids.

School Leadership

Mullen and Hutinger (2008) suggested a primary role of a principal as instructional leader should be that of professional developer. "Principals are in the unique position to create conditions that foster teacher development and student learning" (Mullen & Hutinger, 2008, p. 261). Therefore, it is essential for principals to take on that role and work to build leadership capacity in their faculty. With strong school leadership, PLCs become an effective and sustainable strategy to facilitate relevant professional learning.

In the context of this study, HP exemplified this role of a school leader within the PLC framework. By empowering his staff, he is building his school's collective capacity to gain knowledge and improve practice from their shared learning and experiences. HP discussed how critical it is to provide teaching staff with the opportunity to share their knowledge at the campus and district level.

> Being a presenter, you learn a lot more about yourself and your craft, and so we strongly encourage people to present, because it is a great learning tool, and it is something that is beneficial to them. And the hardest thing to do is to be in front of your peers. And if you can do that you can be a resource for somebody else, you've just made an impact on double the number of students.

The interview with HP ends with his discussion of why he became an educator. Initially, he wanted to make a difference in the lives of all the students in his classroom. However, after transitioning into the school leadership role of High School A1 principal, realized the magnitude of his impact is even greater.

> You know, I share with our staff on a regular basis, I got into education because I wanted to make a difference with every kid that walked in the door of my classroom. Now, I get to make a difference with 2,000 kids every day.

The HP highlighted the critical role that school leaders play in school improvement.

The Role of Culture

Professional learning communities offer a path to lasting system-wide improvement rooted in cultural change. Cultural change is facilitated by the supportive conditions and specifically the relational attributes such as trust, relationships, and encouragement. Hipp et al. (2008) posited "a school's culture is not static, but is a continual interaction in which attitudes, values and skills continually reinforce each other . . . sustain[ing] momentum for school improvement over time" (p. 176). Through the course of this study, District A and High School A1 leaders demonstrated these requisite characteristics. MD described how the PLC culture has encouraged learning liaisons and learning leaders to forge their own informal PLC, unprompted by school or district leadership. "It has come up as a grassroots effort, two of our middle school learning liaisons leaders felt that there was a need for department learning leaders to have the opportunity to get together to learn from one another. And so they've kind of started a PLC group of department learning leaders." Similarly, HT, a first-year teacher at High School A1 shared his first impression of the school's culture.

> When I came into the department, one of the things that I was told was in the English department especially, it's a very tight knit group and I thought, okay, you're saying that

to the new hire, that's great. And then what I experienced was exactly what they said and I think part of it is that PLC.

Collaborative student-centered cultures resulting from deep cultural change, like those in District A and High School A1, are forged and strengthened by a strong PLC framework. A school culture inclusive of all five PLC dimensions is the foundational first level of systemic improvement. When these schools are aligned with district improvement initiatives, and are supported by the district, a network of support is established that facilitates system-wide communication and interaction. In summary, District A created and sustained a culture that can support a network of professional learning community schools.

Final Thoughts and Conclusions

PLCs are "Professional educators working collectively and purposefully to create and sustain a culture of learning for all students and adults" (Hipp & Huffman, 2010, p. 12). More specifically, the following five dimensions characterize PLCs: Shared and Supportive Leadership, Shared Values and Vision, Collective Learning and Application of Practice, Supportive Conditions (Relational), and Supportive Conditions (Structures) (Hord, 1997; Hipp & Huffman, 2010). District A, which began its PLC journey in 2010, personifies the preceding five dimensions that compose a PLC.

Through the results of the PLCA-DS survey instrument, interviews of school and district staff, and review of documents related to PLC implementation, the research questions of the study were addressed. One conclusion the study results yielded was consistent alignment in school and district staff as measured by the PLCA-DS. Furthermore, school and district staff described the specific actions by district staff to support the PLC framework in a similar manner. Participants agreed district leadership supports district and campus PLC implementation through

opportunities for professional development, shared learning, and collaboration. District leadership, as described by school and district staff interviewed, facilitates a culture focused on student learning, shared decision making, and continuous improvement. Professional learning communities are a reform construct. The importance of leadership and culture throughout this change process, critical to school improvement, is evidenced through the study of District A and High School A1. In conclusion, school district leadership must support schools and campus-based leaders in their efforts to create and strengthen a PLC framework that facilitates school improvement efforts.

Recommendations for Future Research

There are many schools and districts not meeting the needs of the diverse student population they serve. For example, I am the principal of a school that is currently in year one of improvement required, based on 2017 state testing results. As our current accountability model continues to require increased student academic performance annually, despite socio-economic background or native language differences, a framework for continuous improvement is essential. District support of the PLC process offers a systemic approach to the complexities associated with school improvement; however, this remains a relatively new area of research. Potential studies could possibly explore the role of district leadership in schools designated as low or under-performing. What behaviors or actions should district leaders take to support these schools? What structures or processes, at the district level, should be in place to promote the development of a viable PLC framework in these schools? What supportive conditions can the district provide to support PLC development at low-performing schools in their district?

In this study, only one school was studied, High School A1. As evidenced by responses from interviews with district level staff, there are many differences related to PLC implementation among elementary, middle, and high schools. In the case of District A, high schools PLC frameworks were the most developed. High School A1 for instance began PLC implementation at the outset of the process in 2010, prior to middle and elementary schools. Other factors to consider in future studies when exploring the district's role in PLC implementation at various school levels, are the differences in team structures, schedules, and instructional methods.

Summary

There is limited research available regarding district leadership's role in PLC implementation. In the current study, I examined specifically how district leaders support the PLC framework as a vehicle for systemic school improvement. My goal was two-fold: 1) to identify school and district staff perceptions regarding district leadership's involvement in the PLC process, and 2) to capture district and staff's input regarding specific district leadership actions related to PLC implementation and development. Based on these findings, the necessity of the five dimensions of a PLC for a viable PLC framework to support systemic school improvement was affirmed. Additionally, the role of district leadership in creating a student-centered, collaborative culture, focused on continuous improvement, was strengthened. District leaders are in a unique position to influence widespread change throughout the individual schools within their district. With this potential influence comes a greater responsibility to ensure schools within the district are aligned with district initiatives and that district initiatives are aligned with school needs. It seems clear from the research results that when district

leadership provide supportive actions to schools utilizing a PLC framework, the likelihood of continuous learning related to school improvement increases.

APPENDIX A

INTERVIEW PROTOCOL AND QUESTIONS

Interview Protocol

Interviewer: Kelly Flowers

Interviewee:

Interview Date and Time:

Location

(Briefly describe the research study, confidentiality, and informed consent)

Greetings:
Prior to the interview, greet the participant and extend appreciation for participation in the study.

Explanation of Study:
Explain you are conducting a research study on how district processes and behaviors of district leaders enable campus leaders and teachers to improve student learning through the PLC framework. The purpose for interviewing principals and district staff is to gain their perceptions about district support of PLC implementation and development.

Interview Process, Consent and Confidentiality:
Review the informed consent form providing more information detailing the study, confidentiality, and the exact parameters of the interviewee's participation. Explain during the course of the study and its subsequent findings, the participant's identity will remain confidential and if at any time the participant would like to leave the study, they are free to do so. Request the participant sign the informed consent form stating the participant has been made aware of their rights.

Questions:
If the participant has any questions following the interview, offer the participant your contact information provided on the informed consent form.

End of Interview:
At the end of the interview, thank the participant.

Interview Questions for District Staff

1. Describe you position and responsibilities in District A.

2. Describe your role in the implementation of the PLC framework at the district level.

3. Describe your role in the implementation of the PLC framework at the school level.

4. Describe actions, tools or structures you have used to help develop the PLC framework at the district level.

5. Describe actions, tools or structures you have used to help develop the PLC framework at the school level.

6. What have been the effects of the PLC framework on district culture?

7. What have been the effects of the PLC framework on school culture?

8. Identify and describe any actions and processes you have developed or supported to assist campus leaders with PLC implementation.

9. What factors or actions by district leadership have inhibited PLC implementation within schools?

10. Describe your role in supporting collaboration among schools within the district?

11. What role if any do you have in the creation or analysis of common formative assessments?

12. How do you support schools in their work of providing opportunities for teachers to share effective professional learning community practices?

Interview Questions for School Staff

1. Describe you position and responsibilities in High School A1.

2. Describe processes district leadership have utilized to lead and/or support a PLC framework at High School A1.

3. Describe your role in the implementation of the PLC framework at High School A1.

4. Describe actions, tools or structures you have used to help develop the PLC framework at High School A1.

5. Describe actions, tools or structures district staff have used to help develop the PLC framework at High School A1.

6. What have been the effects of the PLC framework on the culture of High School A1?

7. What have been the effects of the PLC framework on teacher collaboration and student achievement at High School A1?

8. Identify and describe any actions or processes the district has developed or supported to assist campus leadership in PLC implementation.

9. What factors or actions by district leadership have inhibited PLC implementation within High School A1?

10. What is the district's role in supporting collaboration among schools?

11. What role if any do you have in the creation or analysis of common formative assessments?

12. How does the district support High School A1 in their efforts to provide opportunities for teachers to share effective professional learning community practices?

APPENDIX B

UNT IRB APPROVAL

October 23, 2017

Dr. Jane Huffman
Student Investigator: Kelly Flowers Department of Educational Leadership University of North Texas
RE: Human Subjects Application No. 15-482:

Dear Dr. Huffman,

The UNT Institutional Review Board has reviewed and approved the extension you requested to your project titled “Professional Learning Communities and School Improvement: Implications for District Leadership.” Your extension period is for one year**, October 23, 2017 through October 22, 2018.**
Federal policy 45 CFR 46.109(e) stipulates that IRB approval is for one year only.

Enclosed is your consent document with stamped IRB approval. Please copy and **use this form only** for your study subjects. The UNT IRB must re-review this project prior to any modifications you make in the approved project**.** It is your responsibility according to U.S. Department of Health and Human Services regulations to submit annual and terminal progress reports to the IRB for this project. Please mark your calendar accordingly.

Please contact The Office of Research Integrity and Compliance, 940-565-4643, if you need additional information.

Sincerely

University of North Texas Institutional Review Board
Informed Consent Form

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

Title of Study: Professional Learning Communities and School Improvement: Implications for District Leadership

Student Investigator: Kelly Flowers, University of North Texas (UNT) Department of College of Education. **Supervising Investigator:** Dr. Jane Huffman.

Purpose of the Study: You are being asked to participate in a research study which involves the investigation of a rapidly growing school district, and how the district leaders and central office support campuses with implementing the professional learning community framework and sustain a culture of continuous improvement.

Study Procedures: You will be asked to participate in an interview about your experiences and perceptions of district leaders' actions related to PLC framework creation and development, supporting school improvement efforts. The interview will take approximately 30 minutes. Participants may withdraw at any time from the study.

Foreseeable Risks: No foreseeable risks are involved in this study

Benefits to the Subjects or Others: This study is not expected to be of any direct benefit to you; but we hope to learn more about how systems and structures are aligned districtwide in order to accommodate and support campus cultures of continuous improvement.

Compensation for Participants: You will not receive compensation for your participation.

Procedures for Maintaining Confidentiality of Research Records: The confidentiality of your individual information will be maintained in any publications or presentations regarding this study. Participants; or school names will not be used. Pseudonyms will be assigned to protect identities. All records and information will be kept on a remote storage device and locked in the office of the Supervising Investigator. As per federal regulations, the research participants' information will be maintained for three years and then will be deleted.

Questions about the Study: If you have any questions about the study, you may contact Kelly Flowers at xxxxxxxxxxx or Dr. Jane Huffman at jane.huffman@unt.edu
Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-4643 with any questions regarding the rights of research subject.

Research Participants' Rights:

Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

Kelly Flowers has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.

- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

_____

Printed Name of Participant

_____ _____

Signature of Participant Date

For the Student Investigator or Designee:

I certify that I have reviewed the contents of this form with the subject signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

_____ _____

Signature of Student Investigator Date

APPENDIX C

INTERVIEW INFORMED CONSENT

Informed Consent Form

For Interviews

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

Title of Study: Professional Learning Communities and School Improvement: Implications for District Leadership

Student Investigator: Kelly Flowers, University of North Texas (UNT) Department of College of Education. **Supervising Investigator:** Dr. Jane Huffman.

Purpose of the Study: You are being asked to participate in a research study which involves the investigation of a rapidly growing school district, and how the district leaders and central office support campuses with implementing the professional learning community framework and sustain a culture of continuous improvement.

Study Procedures: You will be asked to participate in an interview about your experiences and perceptions of district leaders' actions related to PLC framework creation and development, supporting school improvement efforts. The interview will take approximately 30 minutes.

Participants may withdraw at any time from the study.

Foreseeable Risks: No foreseeable risks are involved in this study

Benefits to the Subjects or Others: This study is not expected to be of any direct benefit to you; but we hope to learn more about how systems and structures are aligned districtwide in order to accommodate and support campus cultures of continuous improvement.

Compensation for Participants: You will not receive compensation for your participation.

Procedures for Maintaining Confidentiality of Research Records: The confidentiality of your individual information will be maintained in any publications or presentations regarding this study. Participants; or school names will not be used. Pseudonyms will be assigned to protect identities. All records and information will be kept on a remote storage device and locked in the office of the Supervising Investigator. As per federal regulations, the research participants' information will be maintained for three years and then will be deleted.

Questions about the Study: If you have any questions about the study, you may contact Kelly Flowers at xxxxxxxxxxx or Dr. Jane Huffman at jane.huffman@unt.edu

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-4643 with any questions regarding the rights of research subjects.

Research Participants' Rights:

Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- *Kelly Flowers* has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

_____ _____

Signature of Participant Date

For the Student Investigator or Designee:

I certify that I have reviewed the contents of this form with the subject signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

_____ _____

Signature of Student Investigator Date

APPENDIX D

PLCA-DS SURVEY

Directions:

Thank you for participating in the survey. Your feedback is important. The survey assesses your perceptions about your school district's support for the development and implementation of PLCs in schools. The survey contains statements describing actions district leaders take to support schools in the PLC process. Read each statement and use the scale to select the point that best reflects your level of agreement. You may also write comments in the space provided after each section.

Definition:
Professional Learning Community (PLC) - *Professional educators working collectively and purposefully to create and sustain a culture of learning for all students and adults.* (Hipp & Huffman, 2010. Demystifying professional learning communities: Leadership at its best. p.12).

Key Terms:
District Leaders - All central office staff directly associated with curriculum,

instruction, and assessment of students (e.g., Superintendent, Deputy/Assistant Superintendents, Directors, Coordinators, Facilitators)

School Leaders - Principals, Associate/Assistant Principals, Instructional Coaches, Department Chairs, Team Leaders, Grade/Content Leaders

School Staff - All professional staff associated with curriculum, instruction, and assessment of student (e.g., school leaders, teachers, counselors, librarians)

Professional Learning Teams (PLTs) - Teachers collaborating for the purpose of improving teaching and learning (e.g., strengthening teaching skills, enhancing instructional strategies, examining student work, aligning curriculum, instruction, and assessment)

Stakeholders - Parents and community members

Scale:

1 = Strongly Disagree (SD)

2 = Disagree (D)

3 = Somewhat Disagree (SWD)

4 = Somewhat Agree (SWA)

5 = Agree (A)

6 = Strongly Agree (SA)

PLCA-DS Sample Survey Section

	Shared and Supportive Leadership
	District leaders…
1	…model effective leadership practices.
2	…share leadership responsibilities with school level administrators.
3	…build leadership capacity among school staff.
4	…provide opportunities to engage school staff in district-level decision making.
5	…share information with school staff to guide school improvement.
6	…promote a sense of shared responsibility for the learning of all students in the district.
7	…provide opportunities for collaboration between the district and schools.
8	…provide access to relevant data to school staff in order to make decisions about instruction.
9	…collaborate with school staff to assign personnel based on school needs.
10	…establish clear expectations for improvement initiatives, with flexibility for implementation based on school needs.
11	…clearly communicate the importance of alignment of curriculum, instruction, and assessment.
12	…encourage shared accountability among district and school staff.
13	…monitor implementation of effective teaching and learning practices.
14	…support decisions about teaching and learning based on a shared vision.
15	…ensure local education boards adopt practices that support the district vision of schools as professional learning communities.
16	…model professional learning practices in district staff meetings.
Comments:	

APPENDIX E

LEAD 2021 ACTION PLANS

Action Plan

Strategy Number: 1
Plan Number: 5
DATE: December 15, 2010

STRATEGY: We will purposefully hire, continually train, and hold accountable all staff to ensure the fulfillment of District A's mission and strategic objectives.

SPECIFIC RESULT: The practices of effective Professional Learning Communities are systemic in District A.

#	**ACTION STEP** (Number each one)	Assigned to:	Starting Date:	Due Date:	Completed Date:
1	Allocate time within the work day for a minimum of one time per week for job-embedded learning for classroom teachers.				
2	Devise a standardized PLC schedule for each school level.				
3	Define other employee groups who would benefit from a Professional Learning Community and determine the frequency for each group.				
4	GCISD will create intra-district PLC opportunities for single subject teachers (art, choir, ASL, etc.) to participate in district-level PLC's				
5	The work of each Instructional PLC will be anchored by the four critical corollary questions: What is it we expect students to learn? How will we know when students have learned it? How will we respond when students don't learn? How will we respond when students already know it?				
6	Create a district rubric for assessing Professional Learning Communities.				
7	To drive continuous improvement, analyze quantitative and qualitative data using Professional Learning Community rubrics at the team / campus / district level.				

Action Plan

Strategy Number: 3
Plan Number: 4
Date: January 11, 2011

STRATEGY: We will transform from a teaching platform to a learning platform by designing engaging, differentiated work for students toward the accomplishment of the GCISD mission and strategic objectives.

SPECIFIC RESULT: All instructional leaders will be involved in a PLC group that meets regularly to plan for student engagement/differentiation and be accountable for the PLC's learning and planning. X-ref 1.5

#	**ACTION STEP** (Number each one)	Assigned to:	Starting Date:	Due Date:	Completed Date:
1	All PLC groups will develop a plan for professional learning around the topics of engagement and differentiation.				
2	PLC SMART Goals will reflect their focus on student engagement and differentiation.				
3	PLC members will examine student work and levels of student achievement as well as assess levels of student engagement and collaboratively reflect on the evidence collected.				
4	All PLC groups will be provided adequate time on a regular basis for collaboration.				
5	Develop an accountability plan for all PLCs.				
6	PLC time will be documented and shared.				
7	Central administration departments will create job-alike PLC groups for personnel who do not have the opportunity to collaborate on a campus level.				
8	Campus and district administrators will be involved in all PLC efforts through implementation, attendance, communication, and follow-up.				
9	Each campus will develop a systematic method of documentation of collaborative meetings and activities.				
10	Educators will use technology to initiate and share ideas to facilitate the design of differentiated and engaging work for students.				
11	Educators will use technology to initiate and share ideas to facilitate the design of differentiated and engaging work for students.				
12	Develop a central repository for PLC collaborative work/information so that all district schools can access the information and leverage ideas across campuses.				

APPENDIX F

JOB DESCRIPTION–LEARNING LIAISON

Role of the Learning Liaison

The role of the liaison is to support the work of the principal in improving instruction in every classroom, through coaching, consulting, collaborating, and co-teaching with teachers as well as to align professional learning with district and school goals.

1. Facilitate needs assessment on campus.
2. Expand and develop teachers' use of a variety of resources to improve instruction based on identified campus needs.
3. Support instructional staff to ensure that student achievement data drives instructional decisions at the classroom and school level.
4. Support campus administration in ensuring implementation of District A's adopted curriculum.
5. Collaborate with teachers to ensure instruction is aligned with curriculum and meet the needs of all students.
6. Collaborate with classroom teachers to increase the quality and effectiveness of classroom instruction through: PLCs, professional learning, and coaching teachers.
7. Identify and develop model classrooms to build district capacity.
8. Support new hires to build their capacity.
9. In collaboration with principal, design and implement job-embedded, standards-based professional learning.
10. Work collaboratively with the school's Campus Excellence Committee and principal to design, implement, and assess school change initiatives to ensure alignment and focus on intended results.
11. Create a pull environment for teachers to reflect on their own instructional practices.
12. Continually learn and build personal and professional capacity.
13. Develop and maintain ongoing positive professional relationships.

APPENDIX G

PLC AGENDA

PLC Agenda

Date: _____

Meeting Norms (For example):

1. Be positive about ideas and the job
2. Compromise and consensus in decision making
3. Discuss in the group- say it here!
4. Actively listen to all ideas
5. Stay focused on topics and time limits

PLC Members:

Goals/Outcomes: Each week you must:

- Identify the standards that students struggled with last week.
  What interventions need to be made? Ex: spiral, re-teach, tutorials, heads-up, RtI
- Identify targeted standards for the upcoming week and why you chose them.
- Plan the next common assessment. Discuss expectations, what do you want them to be able to do, and how will you know they know. (Rubric)

Choice:

- Analysis of Lesson Plans: What level of Bloom's is the questioning? **(Intentional Design Process)**
- Best practices and lesson share
- Review student work samples (minimum of once a six-weeks)

EXAMPLES!

Topic for Discussion	Who?	Minutes
Opening: Review norms; Define roles: leader, scribe, resource, participant		
Review Literacy cards and determine area of greatest need.	Each teacher	
Discuss other sources of data that we could use as well (once the school year begins)	Each teacher	
Create agenda for our next PLC		

Questions that should guide our work
What do we want our students to learn?
How will we know they have learned it?
How will we respond when a student experiences difficulty?
How will we respond when a student already knows it?

REFERENCES

Adelman, H. S., & Taylor, L. (2007). Systemic change for school improvement. *Journal of Educational and Psychological Consultation, 17*, 55-77.

Anderson, S. E., Mascall, B., Stiegelbauer, S., & Park, J. (2012, June 20). No one way: Differentiating school district leadership and support for school improvement. *Journal of Educational Change, 13*, 403-430. doi:10.1007/s10833-012-9189-y

Astuto, T. A., Clark, D. L., Read, A. M., McGree, K., & Fernandez, L. (1993). *Challenges to dominant assumptions controlling educational reform.* Andover, MA: Regional Laboratory for the Educational Improvement of the Northeast and Islands. doi:10.1007/s10833-012-9189-y

Begley, P. T. (1999). *Values and leadership: Theory development, recent research and an agenda for the future.* Paper presented at the Annual Meeting of the American Educational Research Association, Montreal, Quebec, Canada.

Bogdan, R.C., & Biklen, S. K. (2003*). Qualitative research for education: An introduction to theories and methods* (4th ed.). New York, NY: Pearson.

Boyd, V., & Hord, S. M. (1994). *Schools as learning communities. Issues about Change.* Austin, TX: Southwest Educational Development Laboratory.

Cowan, D. F. (2003). The PLC connection to school improvement. In J. B. Huffman & K. K. Hipp (Eds.), *Reculturing schools as professional learning communities* (pp. 75-82). Lanham, MD: Scarecrow Education.

Cowan, D. F., Joyner, S., & Beckwith, S. (2012). *Getting serious about the system: A fieldbook for district and school leaders*. [Kindle DX version]. Thousand Oaks, CA: Corwin.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.

DuFour, R. (2007). Professional learning communities: A bandwagon, an idea worth considering, or our best hope for high levels of learning? *Middle School Journal*, *39*(1), 4-8.

DuFour, R., & Fullan, M. (2013). *Cultures built to last: Systemic PLCs at work*. Bloomington, IN: Solution Tree Press.

Dufour, R., & Marzano, R. J. (2011). *Leaders of learning: How district, school, and classroom leaders improve student achievement.* Bloomington, IN: Solution Tree Press.

Fullan, M. (1985). Change processes and strategies at the local level. *The Elementary School Journal, 85*, 391-420. doi:0013-5984/85/8503-0006

Fullan, M. (2005a). *Systems thinkers in action: Going beyond the plateau*. London, England: Innovation Unit, Department for Education and Skills.

Fullan, M. (2005b). The tri-level solution: School/district/state synergy. *Education Analyst: Society for the Advancement of Excellence in Education*, 4-10. Retrieved from https://michaelfullan.ca/wp-content/uploads/2016/06/13396062320.pdf

Fullan, M. (2006). The future of educational change: System thinkers in action. *Journal of Educational Change, 7*, 113-122. doi:10.1007/s10833-006-9003-9

Fullan, M. (2007). *The new meaning of educational change* (4th ed.). New York, NY: Teachers College Press. doi:10.1007/s10833-006-9003-9

Fullan, M., Bertani, A., & Quinn, J. (2004). Lessons from district-wide reform. *Educational Leadership, 61*(6), 42-46.

Fulton, K., Yoon, I., & Lee, C. (2005, August). *Induction into learning communities.* Washington, DC: National Commission on Teaching and America's Future. Retrieved from https://files.eric.ed.gov/fulltext/ED494581.pdf

Garrett, K. (2010). Professional learning communities allow a transformational culture to take root. *Education Digest, 76*(2), 4-9.

Goals 2000: Educate America Act, Pub.L. 103-227, H.R. 1804, 103rd Cong. (1994)

Guba, E. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Technology Research and Development, 29*(2), 75-91.

Hall, G. E., & Hord, S. M. (2006). *Implementing change: Patterns, principals, and potholes.* Boston, MA: Pearson.

Hargreaves, A., & Fullan, M. (2013). The power of professional capital. *Journal of Staff Development, 34*(3), 36-39.

Hipp, K. K., & Huffman, J. B. (2003, January). *Professional learning communities: Assessment−development−effects*. Presented at the Professional Learning Communities: Assessment−Development−Effects Symposium conducted at the International Congress for School Effectiveness and Improvement, Sydney, Australia.

Hipp, K. K., & Huffman, J. B. (2010). *Demystifying professional learning communities: School leadership at its best*. Lanham, MD: Rowman & Littlefield Education.

Hipp, K. K., Huffman, J. B., Pankake, A. M., & Olivier, D. F. (2008, January). Sustaining professional learning communities: Case studies. *Journal of Educational Change, 9*, 173-195. doi:10.1007/s10833-007-9060-8

Holzman, M. (1993, September). What is systemic change? *Educational Leadership, 51*, 18.

Hord, S. M. (1997). *Professional learning communities: Communities of continuous inquiry and improvement*. Austin, TX: Southwest Educational Development Laboratory.

Hord, S. M., & Sommers, W. A. (2008). *Leading professional learning communities: Voices from research and practice*. Thousand Oaks, CA: Corwin.

Hord, S. M., Rutherford, W. L., Huling-Austin, L., & Hall, G. E. (1987). *Taking charge of change.* Austin, TX: Southwest Educational Development Laboratory.

Huffman, J. (2003, December). The role of shared values and vision in creating professional learning communities. *NAASP Bulletin, 87*(637), 21-34.

Huffman, J. B., & Jacobson, A. L. (2003, July-September). Perceptions of professional learning communities. *International Journal of Leadership in Education, 6*, 239-250. doi:10.1080/1360312022000017480

Improving American's Schools Act, Pub.L. 103-382, 103rd Cong. (1994).

Iversen, G. R., & Norpoth, H. (1987). *Quantitative applications in the social sciences* (2nd ed.). Thousand Oaks, Sage.

Jorgensen, M. A., & Hoffmann, J. (2003, August). History of no child left behind act of 2001 (NCLB). *Pearson Assessment Report*, 1-8. Retrieved from https://images.pearsonassessments.com/images/tmrs/tmrs_rg/HistoryofNCLB.pdf?WT.mc_id=TMRS_History_of_the_No_Child_Left_Behind

Kennedy, A., Deuel, A., Nelson, T. H., & Slavit, D. (2011, May). Requiring collaboration or distributing leadership? *Phi Delta Kappa, 92*, 20-24.

Kerr, K. A., Marsh, J. A., Ikemoto, G. S., Darilek, H., & Barney, H. (2006). Strategies to promote data use for instructional improvement: Actions, outcomes and lessons from three urban districts. *American Journal of Education. 112*, 496-520.

Knudson, J., Shambaugh, L., & O'Day, J. (2011). *Beyond the school: Exploring a systemic approach to school turnaround* [Policy and practice brief]. *California Collaborative on District Reform*. Retrieved from https://files.eric.ed.gov/fulltext/ED526853.pdf

LeClerc M., Moreau, A. C., Dumouchel, C., Sallafranque, St. Louis, F. (2012, December). Factors that promote progression in schools functioning as professional learning community. *International Journal of Education Policy and Leadership, 7*(7), 1-14.

Lunenburg, F. C. (2010, November). Forces for and resistance to organizational change. *National Forum of Educational Administration and Supervision Journal, 27*(4), 1-10.

Marzano, R., & Waters, T. (2009). *District leadership that works: Striking the right balance*. Bloomington, IN: Solution Tree.

Mason, S. A. (2003, April). *Learning from data: The role of professional learning communities*. Paper presented at the annual meeting of the American Education Research Conference, Chicago, IL. Retrieved from https://files.eric.ed.gov/fulltext/ED476852.pdf

Miles M., & Huberman M. (1994). *Qualitative research: A guide to design and implementation*: San Francisco, CA: Jossey-Bass.

Mullen, C. A., & Hutinger, J. L. (2008). The principal's role in fostering collaborative learning through faculty study group development. *Theory into Practice, 47*, 256-285.

National Center for Education Statistics. (2012). *NAEP 2012: Trends in academic progress.* (NCES 2013-456). Retrieved from https://nces.ed.gov/nationsreportcard/ subject/publications/main2012/pdf/2013456.pdf

National Center for Education Statistics. (2013). *The nation's report card: A first look: 2013 mathematics and reading* (NCES 2014-451). Retrieved from https://nces.ed.gov/nationsreportcard/subject/publications/main2013/pdf/2014451.pdf

National Commission on Excellence in Education. (1983). *A nation at risk: The imperative for educational improvement: A report to the nation and the secretary of education*. Washington, DC: U.S. Department of Education. Retrieved from http://www2.ed.gov/pubs/NatAtRisk/findings.html

No Child Left Behind Act of 2001, 20 U.S.C. §6319 (2002).

Olivier, D. F., & Hipp, K. K. (2010). *Professional learning communities assessment-revised* (PLCA-R). Retrieved from http://www.sedl.org/pubs/catalog/items/plc01.html

Olivier, D. F., Antoine, S., Cormier, R., Lewis, V., Minckler, C., & Stadalis, M. (2009, March). *Assessing schools as professional learning communities*. Paper presented at the Louisiana Education Research Association, Lafayette, LA.

Olivier, D. F., Huffman, J. B., & Cowan, D. F. (2015). *The critical role of district support in the development of the professional learning community process in schools*. Presentation at the 28th International Congress for School Effectiveness and Improvement (ICSEI), Cincinnati, OH.

Organisation for Economic Co-operation and Development. (2012). *PISA 2012 results in focus: What 15-year-olds know and what they can do with what they know.* Retrieved from https://www.oecd.org/pisa/keyfindings/pisa-2012-results-overview.pdf

Osborne, B. (1993, March). *Understanding change in a time of change*. Paper presented at the Annual Conference on Creating the Quality School, Oklahoma City, OK.

Peterson, K. D., & Deal, T. E. (1998, September). Realizing a positive school climate: How leaders influence the culture of schools. *Educational Leadership, 56*(1), 28-30.

Rorrer, A. K., Skrla, L., & Scheurich, J. J. (2008). Districts as institutional actors in educational reform. *Educational Administration Quarterly, 44*(3), 307-358.

Sashkin, M., & Egermeier, J. (1993, October). *Schools change models and processes: A review and synthesis of research and practice*. Washington, DC: Office of Educational Research and Improvement. Retrieved from https://files.eric.ed.gov/fulltext/ED362960.pdf

Schlechty, P. C. (2009) *Leading for learning: How to transform schools into learning organizations*. San Francisco, CA: Jossey-Bass.

Seashore Louis, K., Marks, H. M., & Kruse, S. (1996). Teachers' professional community in restructuring schools. *American Educational Research Journal, 34*(4), 757-798.

Senge, P. (1990). *The fifth discipline*. New York, NY: Doubleday.

Senge, P. (1994). *The fifth discipline fieldbook*. New York, NY: Doubleday.

Sergiovanni, T. J., & Starratt, R. J. (2007). *Supervision: A redefinition* (8th ed.). New York, NY: McGraw Hill.

Spellings, M. (2007, January). *Building on results: A blueprint for strengthening the no child left behind act* [Archived Information]. Retrieved from https://www2.ed.gov/policy/elsec/leg/nclb/buildingonresults.pdf

System. (2018). In *Macmillan's online English dictionary*. Retrieved from http://www.macmillandictionary.com/dictionary/british/system

Thessin, R. A., & Starr, J. P. (2011, March). Supporting the growth of effective professional learning communities districtwide. *Phi Delta Kappan, 92*(6) 48-54.

Thompson, S. C., Gregg, L., & Niska, J. M. (2004). Professional learning communities, leadership and student learning. *Research in Middle Level Education Online, 28*(1). Retrieved from https://files.eric.ed.gov/fulltext/EJ807417.pdf

Tinsley, L. (2016). *District leadership supporting PLC implementation in a rapid growth district.* Retrieved from https://digital.library.unt.edu/ark:/67531/metadc955053/

Wells, C. M., & Feun, L. (2013). Educational change and professional learning communities: A study of two districts. *Journal of Educational Change, 14*, 233-257. doi:10.1007/s10833-012-9202-5

Yin, R. K. (2011). *Qualitative research from start to finish*. New York, NY: The Guilford Press.